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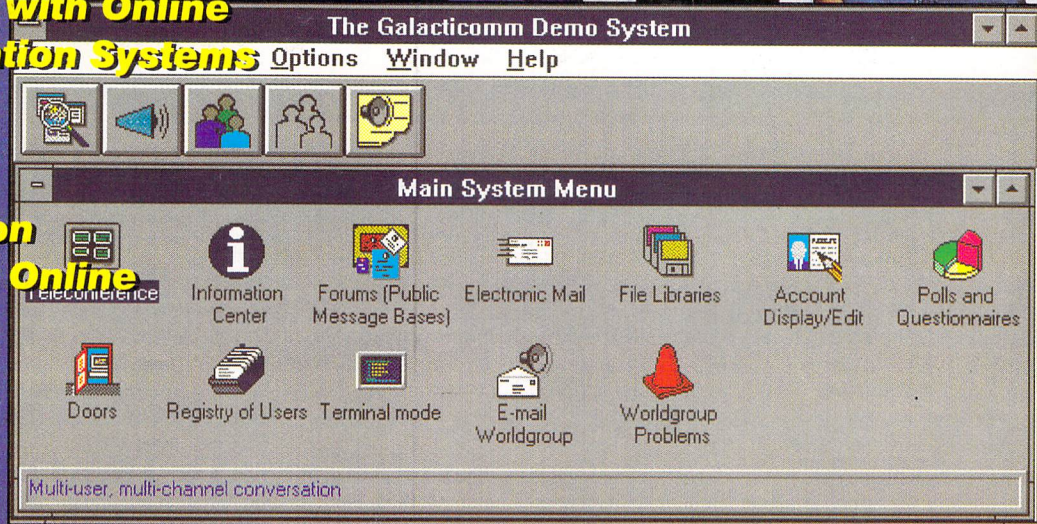
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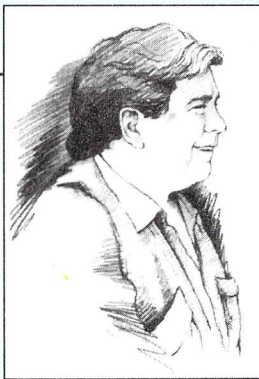
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# BOARDWATCH<sup>®</sup>

## MAGAZINE

**Guide to Electronic Bulletin Boards and The Internet**

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March 1995



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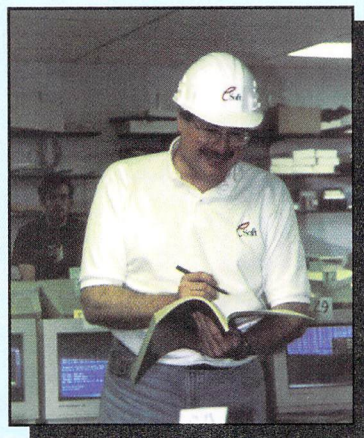
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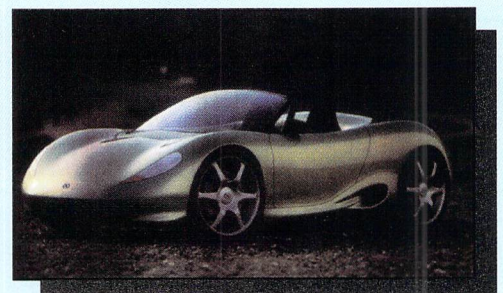
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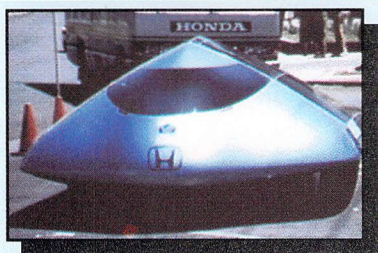


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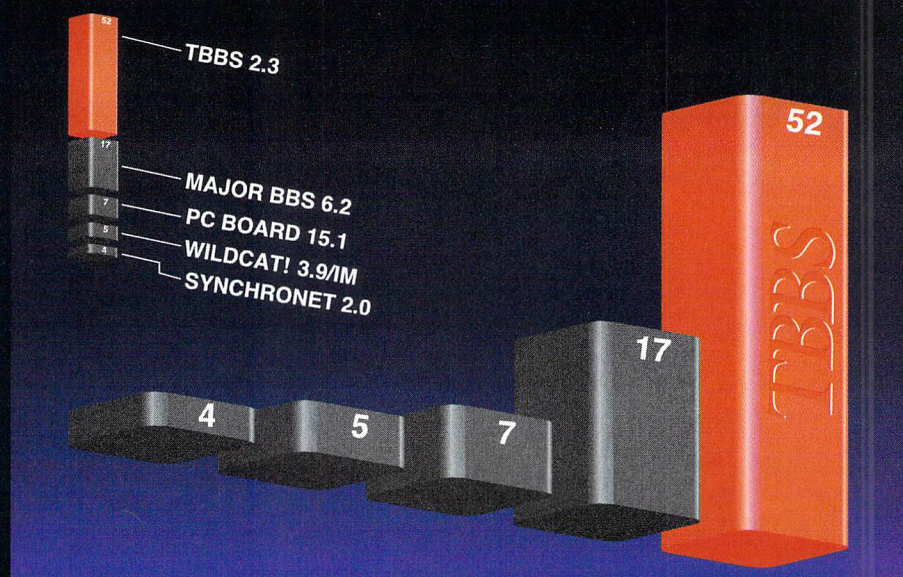
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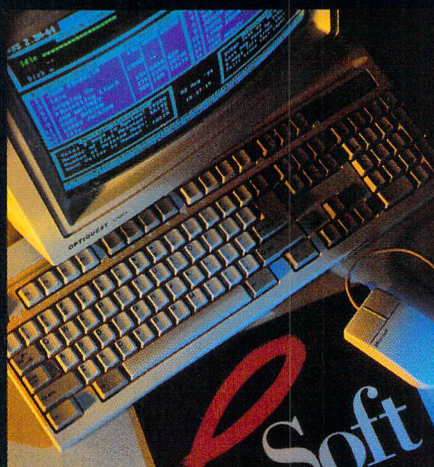




- ▲ In addition to complete documentation, TBBS comes with a 40 minute installation video tape.
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# EDITOR'S NOTES

## DIASPORA 2000 AND THE CONTRACT ON AMERICA

I've become a bit of a C-SPAN junkie of late. There are a lot of committee hearings currently on the problems of the day - illegitimacy, violence, drugs, welfare, taxes, environmental reform, and so forth. Adult politicians get together and strain mightily at every jot and tittle of every issue, and it is endlessly entertaining to watch them overlook the big and basic in favor of the detailed and complicated. It is actually the biggest sin in Washington to "oversimplify" anything while driving all issues into a morass of conflicting and not terribly relevant detail is considered very virtuous and somehow noble - doing the "hard work" of democracy. I tend to oversimplify everything and it works very well for me. I believe in things like "Whatever you tax you get less of, what ever you subsidize, you get more of." If you want less of something, simply tax it. If you want more of something subsidize it. It seems unerring. You want less illegitimacy? A bastard tax. What's so difficult?

And I have two very conflicting views of our entire world in America. One is of utter astonishment that we have an infrastructure that allows us to run clear clean drinkable water out on the ground to grow grass. We can pick up a phone and talk to virtually anyone in the country, or at least to their answering machine, if we know ten numeric digits. We have a hundred channels of glorious, colorful infomercials available by television 24 hours daily for our entertainment. And even the variety and quantity of different kinds of food available at the local supermarket just leaves me in awe. They come from everywhere in the world, and arrive daily - fresh. And there's a supermarket every three miles across the continent in any direction.

At the same time, the world my children perceive through a school system

that has become its own bureaucratic disaster has some problems. Kids with guns? Drugs. Violence. And despite my public antagonism toward the environmental cause celebe', we've got some dirty campsites without question. We have TWO enormous classes of people totally dependent on government largess who view ALL political questions in light of its impact on "their check." There is an enormous group of undereducated, impoverished who feed on the government entitlement programs, and a smaller, much more lavishly catered to group of hundreds of thousands of bureaucrats who exploit and manipulate them to derive their own living from the public trough. It's a feudal system complete with aristocracy and serfs.

But many of the problems we face seem to derive from a rather simple situation - we have too many people standing on too little real estate. Just getting in the car and driving to work each morning is a frustrating, stressful mission for the majority of our producing population. And one of the biggest changes I would note during my lifetime is that anywhere you go, and whatever you do, you are part of an enormous group of people also going and doing the same thing. The way supermarkets operate is to move tremendous loads of food to incredible numbers of shoppers each day. When you enroll your kid in the local school, you are one of thousands doing that at the same time. Every service, every business, every operation revolves around dealing with many thousands of identical customers. Any customer who falls out of the norm is not served. The result is dehumanizing, and ultimately unsatisfying to everyone, though there are real economic efficiencies of scale that drive this.

You can see this trend everywhere. Large department stores move into an area and kill the smaller mom and pop shops on contact. The large stores can SELL goods at a lower price than the small shops can BUY the same goods. And while we all like service and personal attention, when push comes to shove most of us will lunge for the 10

percent discount 100 percent of the time.

But there is a counter trend. Much of our population moved to the cities as part of the industrialization of our earlier agricultural economy. The automobile in post World War II America allowed a migration out of the cities into suburban lifestyles. But at this point, life in the 'burbs just isn't what it was. We baby boomers continue to swing the big mallet on most trends, and the bulk of us are about 35-50 now. I've started to watch one or two, then a few, then a few more gradually move toward a different vision of what would be a "good" environment to live in. And it seems to drive toward Montrose Colorado, Casper Wyoming, Joplin Missouri, and hundreds of other small rural towns across the West. Property is relatively inexpensive, taxes are low, and the local supermarket manager, while not a throwback to the 1950s, is likely to recognize you when you come in, and might even order in that special brand of soy sauce you use in the teriyaki, if you schmooze him nicely. The local schools are smallish. And there is a certain pastoral bucolic element to more rural living.

What's new about this is that these people are neither hunters nor farmers, they haven't changed their lives entirely to escape the "rat race," they aren't retired, and they do still want access to many of the things they had in suburbia-land. They tend instead to be software developers, financial managers, authors, columnists, or similarly engaged in some form of relatively independent business. They are still very much working. And they often do have to travel back into the breach of the crowded lanes in America, they just don't have to stay long.

I think this is the first of a wave of such workers. Years ago we heard all kinds of would-be prophets and visionaries talk about home workers and telecommuters who pontificated on how various corporate jobs would be performed from home. As is often the case, they were right but they had the pic-



ture all wrong. These people are not employees of corporate America, but they do perform some of the same tasks - but in different ways and usually as independent contractors. One woman here in Colorado has a small shop of five or six employees up in the mountains who do telephone support for software companies. Once your customers are dialing the phone, it doesn't matter a great deal if it terminates in your office in San Jose or up in the Rockies. And she's building a pretty good business out of it.

The element driving this is the natural human desire for a better living environment. Downtown Los Angeles doesn't have the allure it did, I guess they even lost their LA LAW television show now. And it looks like we are headed toward a new kind of diaspora - a dispersal of population back out into rural areas driven by this desire, a baby boom generation now at an age and with the financial resources to pull it off, and the technology to maintain a kind of dispersed economy.

It could change the face of America - and not just for those in high-tech independent businesses. As a sufficient number of these people do disperse to their new digs outside of Joplin Missouri or Montrose Colorado, they will not likely want the isolation that goes with it. Federal Express is going to face a wider delivery footprint. Taco Bell may find that they are going to have to move toward smaller and more rural taco stands. Mail order buying and delivery will expand. And perhaps millions of even fairly mundane jobs in delivery, transportation, and so forth will also migrate into rural areas. As a result, these areas won't be quite so rural, but they won't be quite suburban either. Air transportation would move toward more and smaller planes servicing smaller airports. In other words, I see a general dispersion of MOST businesses into wider areas. This offers huge opportunities for growth in hundreds of business segments, but the effect will be that for any business you touch, it will feel and operate SMALLER. More dispersed. And perhaps more human as well.

The trick is the enabling technology - primarily communications. Direct Broadcast Satellite essentially brings cable equivalent television to the entire land mass. But conventional telephone, wireless cellular technologies, data communications, video communications, facsimile, the Internet, and dozens of other elements are on the

verge of enabling all of this to happen for real - just barely. I still view most of them as badly broken infant devices. But it's starting to work well enough to do business.

We have one tiny little problem. We have the wrong people leading the charge. Much of the progress in communications technology is currently held hostage by telephone companies. And I mean that literally. They have it and are holding it hostage. I am at this time convinced that the dullest minds in the universe are at the helm in our telcos and that anyone with a clue has left them and moved on to greener pastures. We've effectively filtered out all the good heads and expelled them from our telephone infrastructure leaving it manned by morons. And arrogant ones at that.

Lt. Governor Cassidy here in Colorado has accidentally illustrated the point from 13 different directions at once. He's an example of a new wave in politics. Since Al Gore took up the Information Infrastructure task, Lt. Governors across the land have finally found a job - developing telecommunications policy for their states. And Cassidy has done an excellent job of it. He put together a report on telecommunications policy for Colorado, which if implemented, would overnight cause Colorado to become the place to locate your small, entrepreneurial, clean, high-tech, profitable business. In response to the proposal, U.S. West actually released a public statement that "they did not intend to introduce any legislation along those lines this year." I was flabbergasted to learn this as I was unaware that we had elected U.S. West to a legislative position allowing them to introduce squat. But though it was probably a PR slip of the tongue it is quite true. And Governor Roy Romer, characterized by some as a wholly owned subsidiary of U.S. West, chimed in that whatever they wanted, he basically wanted too - and with even better reasons.

In this issue we take a look at ISDN circa 1995. Pacific Bell has deployed it pretty widely. In December, Ameritech went public with their residential tariff at **\$38** per month for 2B+D ISDN. Bell Atlantic should do the same in January. We finally, after many years, even had two ISDN lines installed at the Boardwatch offices by U.S. West - business service at **\$70** per month each. So we are once again tentatively enthusiastic about ISDN as a widely available telecommunications service.

(Some days I feel like Charlie Brown with the football). It will make connections to the Internet much more feasible and useful at 64 Kbps or 128 Kbps. We recently traveled to Aurora Illinois to visit the Aquila BBS



as well as Chris Babb's home office across town to see both ends of an ISDN SLIP connection that operates flawlessly at 115 Kbps for some **\$37.50** to Aquila and about **\$40** per month to Ameritech. The World Wide Web at 115 Kbps to the home is inspiring. This sounds like good news. But from our perspective, our first story on ISDN was in a 1988 issue of Boardwatch Magazine. And ISDN had been pretty clearly proposed, defined, and priced in the late 1970s. But we've endured 15 years of agonizing by the telcos on how they can get into "value added" services, which means price it at **\$120** per month. Their definition of "market" demand means the point at which someone will guarantee them in writing that EVERYONE who has plain old telephone service will buy it. And so there has been hopelessly little in the way of new telephone technology beyond touch tone service deployed in the last 15 years.

I'm actually almost sympathetic to the situation. They have hundreds of customers paying hundreds or even thousands of dollars for dedicated 56 Kbps or T1 leased lines that are woefully underutilized in most cases. ISDN would allow companies that have to have some data connectivity to drop those expensive **\$400** per month installations and use ISDN instead - cannibalizing their own customer base. And for an undefined number of new accounts at the **\$40** level. How far does this go? The ISDN line Chris Babb had installed is in actuality a full T1 line - with two channels activated instead of the 24 channels making up a full T1.

The heart of the conundrum is that we have allowed, through a series of historical accidents, the pricing of communications services in this country to get entirely out of line with reality. Essentially the same connection is variously priced at **\$40**, **\$400**, **\$4000** and whatever you can get with no cost basis



at all. They are selling air, and the only thing that holds it all together in most cases is government mandates that protect them from competition. And there are powerful disincentives to introducing lower cost services that accomplish the same thing.

So relying on the current corporate structure of telecommunications providers to move us toward inexpensive and powerful services that have already long been technically feasible, is like waiting for a tornado to blow randomly through a junkyard somewhere and assemble a Boeing 747 out of the debris. Sure, statistically it could happen I guess.

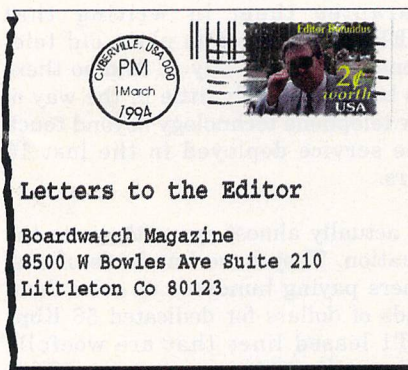
It would be very timely, perhaps critical, to this vision of a dispersing, changing economy, to have a clear national policy that encourages innovation, entrepreneurship, and deployment of telecommunications infrastructure to support it. Because you can't get ISDN in rural Colorado. And you can't get it in rural Wyoming. And you can't get it in rural Missouri. There are no T-1 connections available to the Internet in these areas. And you can't do video conferencing from there.

This month, the new Republican majority is holding closed "secret" meetings to rewrite the Communications Act of 1934. The meetings are closed to everyone else, but open to the telephone companies and the cable TV companies. They have used our money to buy our Congress. And now they are going to do just what U.S. West implied, introduce THEIR legislation. It will be called "deregulation." But without seeing or reading any of it, I can tell you it will be a bill to guarantee them a business, and essentially barring anyone else from having any of it under any conditions. The "compromise" will strictly be between cable companies and phone companies. In doing so, we will hand a key needed component of our future over to absolutely the least qualified and least creative minds in the country for their very immediate profit. It shapes up as the largest sell-out ever undertaken in Washington - and a very simple one - Newt and the boys get cash if they can mandate that the telcos/cables get cash. Your cash actually, but whatever. And it has the potential to totally kill the deployment of telecommunications services nationwide to any but the most profitable areas.

The only way to break the logjam that I can see is precisely what I advocated in a 1988 editorial - let anyone with a 1964 Chevy utility truck and a rusty pair of pliers BE the phone company. If you can deliver T1 lines for \$40 - go for it. But we would guess that the bill coming out of this Congress will have some curious barriers to doing that. And our observation is that when the march of technology falls under government regulation and "cooperative partnerships between government and business," it stops where it is, and that's what you live with. Such a turn would end this new diaspora and lock us all into the metropolitan war zones we now enjoy.

If the Telecommunications Competition and Deregulation Act of 1995 is to be crafted behind closed doors with only the telcos in attendance, I'm going to guess the two certain things it won't accomplish are competition and deregulation. A poor showing of it Newt. I'd call it a Contract On America.

Jack Rickard  
Editor Rotundus.



## LETTERS TO THE EDITOR

Address correspondence to Letters to the Editor, Boardwatch Magazine, 8500 West Bowles Ave., Suite 210, Littleton, CO 80123; by fax to (303)973-3731 or by e-mail to [letters@boardwatch.com](mailto:letters@boardwatch.com).

### WEB WINS

Howzit Jack,

As a SYSOP and an internet user from a UNIX text mode, I was also, as many, getting tired of "all" the internet talk and not enough BBS Talk. However, over the last two years of reading your rag, I have always learned to accept your insight on the changing market.

I recently started playing "middle man" for a local provider that is providing full Internet access for \$50 setup fee (includes the book the Windows Internet Book & Software, and their own totally automated, carry you through diskette for logon) and \$29 a month for full unlimited access with

no hidden fees. WOW!!!!, I thought I knew it all, but man have I been missing the big picture "in Color" Colour for your European readers. Lord, I hate to say this, but you were right again. It is most awesome in a graphical environment, and my 6 year old was pointing and clicking in just a few minutes. They found (excuse my mistakes) a WWW site with the Paramount stuff I think it was and were printing out Beavis and Butthead and Simpsons pictures on the old HP 560C. I am using Netscape for all of this and if there is better than this out there, I can only await. From a guy that was logging in through a local University, and doing it from the UNIX prompt, I was somewhat bored in just a few short months. NOW, all I can say is WOW!!!

I am closing my 7 lines of my two BBS' here at the end of the month (lack of support) and will take this \$200 a month, plus Hardware repair money and save it and surf the net for awhile. Sheez, just when I thought I could let my subscription run out, now that I will quit SYSOP'n, I now know I need it to stay abreast of "The Information Super Highway".

Scott M. Gray  
[shanty@pixluser.pixl.com](mailto:shanty@pixluser.pixl.com)

♦♦♦

Scott:

*We're rather a bit off of one wall and into another. The standard dialup BBS has plenty of life left in it - it will just go through*



some changes. But it is notable that the Internet you knew from the command line is little different from the Internet you know via graphic interface - and at the same time it is completely different. It went from a sprawling mess with the worst single possible interface in the world for new callers to a sprawling mess with the best possible interface for new callers - all with the release of a couple of freeware programs. I love the whole soap opera here.

The heart of it all is the connectivity, and it's true we've been harping on the Internet for a number of years. I've always thought the connectivity was the hard part and prettying it up would come when it would come. But the enabling power of the interface even caught me by surprise. For many viewing the online thing from the outside, if you demonstrate computers connected continuously on a global basis, they kind of nod their head maybe. Show them the same thing with the click/grunt interface, and they light up like they've just discovered sex, chocolate and rock n'roll all in the same afternoon.

In any event, I'm pleased you've decided to stay with us. There is a perception, primarily among sysops, that Boardwatch is read primarily by sysops. I suppose it is, but they don't comprise the bulk of our readership and probably never did. It's not particularly to my advantage to point this out to them. But there are many people online who like to know a bit about the online services they connect to, keep up with the technology a bit, and find out about new things to do with the modem. And most online aficionados have at one time or another entertained the idea of operating their own online service. Some do for awhile. Some do it several times. Some haven't yet. But it contributes to my strongly held but not very adequately conveyed view that the difference between a system operator and a caller is that one of them just can't bring themselves to hang up the phone.

Jack Rickard

♦♦♦

## LOYAL TO THE LAST

Hi Jack,

Ya know. I read your 1995 Editor's Notes, in fact I just finished. For years, and I don't care how many... it goes back as far as you or I care to recall, I have derived great pleasure in just having this li'l place here in the e-mail section of Boardwatch to leave a little note in passing, a congrats or two, or even a wish of better things to come. Its a place I feel real safe and welcome.

Of all the "first of the year" articles I enjoyed this one the most. I've found that my interest in First or Last has always been piqued if I am one of those in the middle. Since I have a personality, not unlike lots of

other people, that does not like to be cast in iron (something I've already experienced while working in the mills & mines <g>.) I realize its both intuitive and instinctual for me to gravitate to extremes so that I can identify the correct borders of context, as I define it.

And as I type this I'm begining to wonder/wander, as most folks do, what the hell am I really saying? Well, I think what I am getting at is that the first or last crap is just that.

As you pointed out in your article, your job is to identify where Boardwatch "falls short". I was glad to see you speak your piece(peace?) on these issues. They are important, "at some level". But I think I see a better place relative to first and last that you are unaware of because of the nature of your position.

I would prefer to avoid calling it a shortcoming. Because its kind of like asking someone to look at thier ear without the aid of a reflective device. What I think you cannot see is that Boardwatch readers are not easily swayed by any of this first or last stuff. I see "us" loyal Boardwatchers as those who want what is NEXT. We can all see through most of the hype and are constantly in search of what is NEXT and what REALLY works for us instead of it working us over. There is hardly a better place to find out what is going to be NEXT than in Boardwatch, and Boardwatch really is Jack Rickard showing us what is NEXT.

First and last are too finite. Boardwatchers demand and get more than the usual "first" or "last". The reason is quite simple. NEXT is the concept of position that is what I found so fascinating about those creatures in that Star Trek episode that we both enjoyed. The Pakleds were on a never-ending journey to the very NEXT thing to be "gathered".

That being said. I'd better get going. Got to get busy on the NEXT right thing for me to do today. Since I have had years of enjoying your ideas and concepts I hope my sharing this point of view of NEXT relative to first or last is one you find as both accurate and as enjoyable as I do.

Bill Elwood  
[bill.elwood@boardwatch.com](mailto:bill.elwood@boardwatch.com)

♦♦♦

Bill:

The trigger to that editorial was a dozen readers who each forwarded notes concerning a debate between a couple of other magazines sporting conflicting and somewhat naive claims that they were the "first" magazine to cover the Internet. But the real driver was the number of press releases we receive

weekly now that claim to be the first of something that in most cases they not only weren't first at, but of things that crested, waned, and disappeared years ago. In fact probably 90% of the press releases we get now are "firsts" - but not really and many are comical.

The Pakleds episode of Star Trek Next Generation should indeed probably be some sort of Boardwatch theme song. I didn't know they were called Pakleds, but referred to them as "Morons in Space" for some time. In the episode, the Enterprise encountered this group of intellectual giants apparently stranded in space in a ship comprised of a collection of technological oddities from nearly everywhere. When asked what they were doing out there, they replied "We look for things." When asked what kind of things, they replied "Things to make us go." The followup question was of course, "Where are you going?" And the reply, predictably enough, was "To look for things."

And so we do. Some of it is junk. Some of it is treasure. And the game of course is to tell the former from the latter with some degree of precision. It's not something you ever get "good" at, but to the degree we succeed, our readers will find value. And to the degree we fail, we risk irrelevancy as a publication. Some days are better than others. But I agree entirely that the emphasis should be on NEXT, not on past victories - ergo the editorial. One of the cruelties of the publishing business is that you're only as good as your last issue...

Jack Rickard

♦♦♦

## NOT SO SUPERNET

Jack:

As the former Executive Director of Colorado SuperNet (1987-1993), I feel compelled to provide some clarification to your comments in your response to a letter from Dr. Philip Suarez (February, 1995).

From their initial contact with Colorado SuperNet, Spectrum Online Services (by which Rocky Mountain Internet, Inc. was then known) made it clear that it was their intent to resell Internet services in competition with Colorado SuperNet. In fact, they claimed that the revenues from such resale would finance their BBS operation. Therefore, it is inaccurate to state, as you did, that SuperNet forced SOS into becoming an Internet service provider.

SuperNet declined to provide SOS service on that basis NOT because SuperNet feared competition but for several other reasons. First, SuperNet was established as a provider of Internet services, not as a wholesaler of Internet access. To begin to offer



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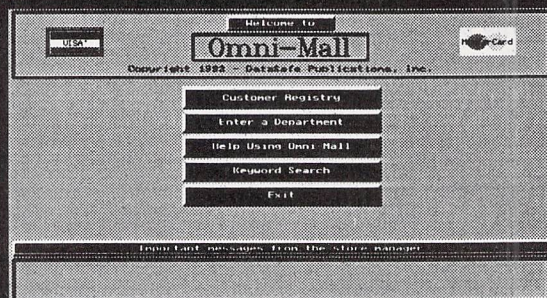
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- RIPscrip support



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such services would have changed the purpose of the organization. Second, as a 501(c)3 organization, SuperNet was already concerned that its growing business with commercial organizations, despite requiring compliance with the existing National Science Foundation Appropriate Use Policy, was testing the limits of its 501 compliance. Certainly offering wholesale Internet access would have only aggravated the situation. Third, SuperNet offered to provide SOS with service as an 'office park' reseller, a program by which SOS could have resold Internet access within a defined and proscribed area, in order for them to receive revenue to meet their original need to finance their BBS. They declined. SuperNet then referred SOS to an Internet access wholesaler (ANS CO+RE) which had a hub in Colorado Springs.

SOS also approached SuperNet about the possibility of financing SOS's purchase of internetworking equipment in the short term. SuperNet declined, but suggested SOS directly contact the vendor to inquire about financing. This they did, as confirmed to me in a recent conversation with a sales representative of the vendor.

It is not at all ironic, as you imply, that RMII should now be in competition with SuperNet. This was their intent, as expressed to SuperNet, from the outset. In fact, Internet Express, then known as CNS, also approached SuperNet to provide wholesale Internet access so that they could establish an Internet resale business. They were turned down for the same reasons. I am pleased that RMII and Internet Express are now viable internet service providers in Colorado. SuperNet simply did not believe it was our obligation to change the nature of our business (from retail to wholesale) and to finance the purchase of equipment for an organization (SOS) which intended to establish itself as a direct competitor. Certainly even a strong free-market capitalist would not advocate such an action as good business practices.

BTW, I love your magazine and read it religiously every month. Keep up the good work.

Ken Harmon  
kharmon@krh.com

♦♦♦

Ken:

*Your recollection doesn't precisely match that of Jim Welch and Chris Phillips and I was very much in contact with them at the time. It remains true that the same set of events are colored in perception by the point of view of the participants. I happen to know the individuals involved in this case, they got out of the Army and started a BBS. All of*

*their plans grew from there and what they learned of Internet Connectivity issues changed them rather dramatically.*

*First, there is no wholesale and no retail to connectivity. There is only pipe size. Second, how you sell it has little impact either on your 501 status and certainly none on the Acceptable Use Policy - all Internet Service Providers from the beginning and on into growth were under the same policy, and many were in fact 501s with a different approach to connectivity distribution than that held by Colorado SuperNet. But implicit even in your comments is that "good business practice" precludes you from selling connectivity in such a way that your customers become your competitors. This makes sense. And even now it is a view held by some of the ISPs. It is nonetheless grossly naive and in fact fatally flawed as demonstrated by THIS SPECIFIC CASE. In restricting, in very dubious legal fashion, the use and/or resale of connectivity, you are attempting a gravity defying act that strains the nature and properties of the product itself. And you can actually CAUSE competition. I can't tell you the number of ISP's I know personally who never would have become ISP's but for the fact that they had to sell it to be able to afford it - much after the fashion of cocaine. They basically weren't allowed to split the costs among a few friends to buy the small pipe, so they had to buy a huge one and resell it to achieve the same result.*

*There are those who naively think they can print a few lines of 8 point type on a contract and change the laws of physics and the nature of the universe. You can't. And this was a sterling case of how it happens. Read Gordon Cook's interview with Tom Jennings in our last issue for another. Mr. Jennings now operates one of the more significant, and enlightened ISP companies in the Bay area generating some \$50K per month in revenues by selling Internet connectivity at very low cost and ENCOURAGING people to pass the connectivity along. And the whole concept of being involved in such a business was NOT on his list of life goals when he got sucked into the maw of this monster by precisely this same dog in the manger stance struck by Alternet at the time. It seems everyone on the planet wants to be the last hot dog stand on the road - a road that has only one attraction - it's circular.*

*We are seeing this AGAIN. MCI who recently announced their internetMCI offering, was quite clear in telephone conversations toward the end of last year that they would sell it quite without restrictions to ISPs, bulletin boards, and anyone else who could cough a check. They've since told numerous entities that they would NOT sell to anyone who offered it for resale, and at the same time DID sell it to some on that basis - in some cases on the same day in different parts of the country. They are thoroughly confused at*

*a deep visceral level, and you can at this moment get any story you want to hear by locating a different suit in the corporation. They intend to offer SLIP/PPP connections to the public, as well as larger pipe sizes, don't want to compete with themselves or their customers, and are temporarily frozen in space trying to read messages from God in cloud formations.*

*Meanwhile, Sprint continues to sell to anybody with a wall strong enough to hold the RJ-45 socket. They are internally now in a state of twitter over the fact that they just hooked up a T1 line to a blue barn out in a field behind Jim Dunmeyer's house in rural Michigan. Jim runs the Toledo TBBS and has plans to offer SLIP connections to cows from what I understand, or anyone else in the area that wants to hook up to the Internet. And so it goes.*

*The bottom line is that in order to come to completely different conclusions, I suppose we must view the events from a different perspective Ken. I am not entirely unfamiliar with this particular case, and think it is a good example. My conclusion is that you should have not only hooked them up, but encouraged them to hook up others, and so on in a heirarchical chain of connectivity much like the root system of a large tree. Soon everyone on the planet would be hooked up somewhere and then where would we be...*

Jack Rickard

♦♦♦

## DOS DEAD - WINDOWS WINS

Dear Jack,

I suppose it would be proper and keeping with tradition if I were to first heap some well deserved praise your way and say that I love your magazine. While the addition of some columns (the major on-line service columns) have meant that I don't read the magazine absolutely cover to cover any more, it still gets \*mostly\* all read and remains my favorite. Keep up the good work.

I read January's article on the BBS world and graphics by Jim Thompson with great interest. Most of what Jim had to say I frankly have read or seen before, though it was interesting to see in the pages of Boardwatch what everyone else on the Net has been saying for some time, namely, that RIP 2 is too late, is flogging the dead DOS horse and, assuming it does get released, will be DOA.

While I was thinking about the paralyzingly slow migration to Windows in the BBS world, I also happened to be watching an ad from Big Blue advertising their new software's internet capability with some high tech nuns for spokespersons. And as I was watching this commercial (hell - you could-



n't MISS seeing it it was being shown so much - including during the Superbowl! I started to think about what has gone so wrong that we have prime time commercials advertising pointing and clicking on the on-line world by the world's largest computer company, and I feel left out. And you should too Jack, cause the Nun had rad about it in Wired - not Boardwatch!

To mix a few metaphors, my basic point is this: the BBS software market has fumbled the ball and as a result we are missing the boat. And while, yes, there will be other boats leaving, but everyone that has left so far has my customer's money already on board. We have a mass market in on-line services developing. And they are doing so because of Windows and the Net.

And let's make that point perfectly clear: this is NOT a Dos driven phenomenon. Backwards compatability with a moldy 286 or some 10 year old Commodore 64 is NOT what is driving the new market. The action in the on-line market is in Windows and ONLY in Windows. So why are we stuck in a DOS BBS world?

Yes, it is changing. MediaHost is there, and PowerBBS 4.0 has just been released. The "beta" testing with Excalibur continues (next to Windows 9x this has got to be the longest public "Beta test" in history). Omniterm for Windows is also now going the "charge em now beta test" pattern of Excalibur. Filx is supposedly out there somewhere.

And not one of those packages is Planet Connect ready, and only PowerBBS can support ANY kind of off-system mail. It is enough to make you want to scream. It is my understanding none of them will allow connection to eSoft's IPAD so as to give the user SLIP/PPP services.

.Robert  
robert.trifts@canrem.com

♦♦♦

Robert:

*It would not be untoward that in the march of technology some vendors fade and new ones take their place. Windows is indeed powerful though I'm not sure it is the ONLY game in town. But the interface is superior to what we've had. We're encountering a very strange phenomenon right now with regards to Windows NT. Everyone knows Windows 95 is coming, though August 95 is the latest release date I've heard. And NT has widely been pooh-poohed in the press as a non-contender with OS/2 Warp picking up some steam. Oddly, I'm running into an almost coincidental series of individuals who tell me, and more interestingly tell me almost apologetically, that they are running NT and it is working VERY well for their applica-*

*tion. It's quite strange. Since the press hasn't picked up on it and touted it, they almost feel GUILTY for trying it and discovering that in some of the more recent releases of Windows NT, it WORKS and offers some serious advantages over Windows 3.1 or OS/2.*

*So we installed it and found some curious things - even beyond the bizarre requirement that you press CTRL-ALT-DEL to logon (is this an inside joke on Novell's "escape to continue" thing?). For one thing, the true multi-tasking in it makes it at least seem one hell of a lot faster than Windows 3.1. It installed without incident (Warp ate my machine at home and wouldn't give it back - another story) and it has TCP/IP in it - we had it on our LAN in minutes by basically giving it an IP number. Further, there are a whole series of freeware servers for this thing - a great web server, a gopher server, an ftp server, a POPmail server, SMTP mail server. They work well and the capacity on a 486-66 seems almost unlimited. I'm sure it isn't, but we're having a hell of a time finding the walls. Microsoft has a web server of their own with some very interesting information on it, but perhaps most interesting is that the server itself runs on NT using a freeware web server program (<http://www.microsoft.com> predictably enough).*

*So I'm with you guy. Jim Thompson is doing an article on a Windows client/server version of MajorBBS titled WorkGroup that is very impressive - basically AOL on a PC. It's not particularly an Internet appliance, but for dialup applications it may be huge.*

*We've been "gonna do" the Excalibur story for about 10 consecutive issues. Something always seems to get in the way, and I've found that if the universe is fighting me on a story, there is usually a reason and waiting another issue or so won't be the end of the world. We still intend to. I rather gather your assessment of RIP 2.0, which was finally released during the final week of January 1995, is probably accurate. Too little, but more importantly too late.*

Jack Rickard

♦♦♦

## WARPED

Jim,

I read your review of OS/2 Warp V3 in the February issue of Boardwatch Magazine. I want to thank you for a well-written review. I particularly liked your honesty in stating that you fully expected to hate Warp. I think that lots of users will relate to that attitude; hopefully your review will prompt them to take another look at the product. I think it's a winner, but that's something each user has to be willing to accept based on their own experiences with it. The first step is getting them to take another look at it.

The only thing I would have added to your review is to point out that there is a growing body of enthusiastic users who are willing to help if the new user runs into problems. There are OS/2 User groups springing up all over, and there is, as Boardwatch points out in one of its regular list-keeper's list, a growing number of OS/2 BBSes where assistance, in the form of advice, fixes and shareware/freeware can be readily obtained. On the Internet those things take the form of archive servers at [software.watson.ibm.com](http://software.watson.ibm.com) and [Hobbes.nmsu.edu](http://Hobbes.nmsu.edu) (fixes and software, respectively) and the [comp.os.os2](http://comp.os.os2) newsgroups.

Again, Thanks for a good article. Hopefully Boardwatch will continue to monitor OS/2 developments and give it a fair shake.

Mike  
Mahoney@emdisle.Fidonet.Org

♦♦♦

Mike:

*It ate my machine. I want it back. Jim loves it. But we'll try to "give it a fair shake."*

Jack

♦♦♦

## WHERE IS AOL?

Dear Mr. Rickard,

If you check the records I have been a subscriber of Boardwatch for almost two years now, and have really enjoyed the magazine and its coverage of BBS's and Online Services as well as the Internet, WWW, etc. It is informative and very useful.

However, I have noticed as of late that you have no coverage at all of AOL (America OnLine) and was wondering if I missed something!

I recall a few months ago there was an AOL monthly column, just like what we see in the latest issue, one for Prodigy, GENie, Delphi, and I think Compuserve. What happened to AOL?

It has the largest base of users, over 1.5 million, and is on the edge of technology.

I'd love to know why there is no longer AOL coverage.

Thanks. By the way the Web Browser on Prodigy is great!

John Delaney  
Alton, IL  
Skifever@aol.Com

♦♦♦



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|--------------|--------|----------|--------------------|
| bl.zip       | 66892  | 9/14/93  | Black              |
| down.zip     | 171873 | 11/16/93 | Great tank game    |
| minivt       | 289560 | 8/28/93  | nsijohn for window |
| 22111        | 22111  | 8/22/93  | Game Of Tetris For |
| w3games      | 315202 | 8/22/93  | Several Games For  |
| wincha.zip   | 181454 | 8/22/93  | Chess For Windows  |
| wslam10.zip  | 44965  | 11/15/93 | Windows Tetris M   |
| 81blakee.zip | 3554   |          |                    |
| 81blakee.zip | 3554   |          |                    |

Upload

File Name: c:\local\camelot.exe  
File Size: 488456  
Bytes Sent: 28194  
CPS: 2763

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File Name: fishy.gif  
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Bytes Sent: 48814  
CPS: 1641

Message to friend

Dear Mr. Weber,  
Fantastic is the only word I can think of to describe your software with Windows! My friends and I have been running a number of DO... incredible! Right now I... another user all at the s...

On a different note, services show the same bit... terminal you have a tool... Microsoft's Word of Writ... I also don't... True-Type Wing-Ding For... angry, ice blue italics wh... Thank you for freem... well as provide publicat...

Sincerely,  
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President, XRY Technologies LTD.

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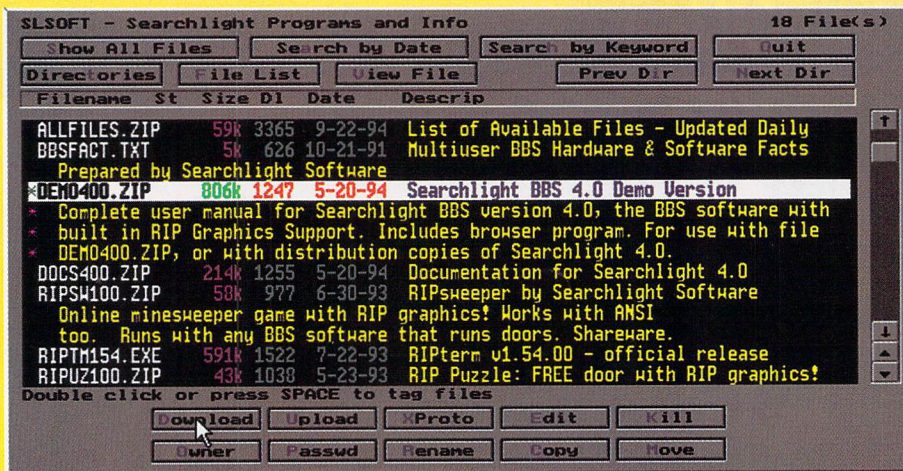
As for expandability, Excalibur offers true Plug'N Play abilities. Imagine doors that are both hassle free and easy to use. By using Excalibur's *Application Programming Interface (API)*, third party developers have created everything from Internet gateways and databases to shopping malls and interactive games. The possibilities are endless. Modem into Excalibur HQ/USA at **918.496.8113** or call 800.EXCAL.BBS (800.392.2522). In Canada, modem into Excalibur HQ/Canada at 905.508.8872. Find out what users worldwide are heralding as "the next generation in BBS software".



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*Our RIP file manager lets you scroll anywhere in a directory...you can tag items and run commands by clicking with the mouse*

When the first Bulletin Board Systems went online in 1978, graphical user interfaces didn't exist. Callers had to stare at text menus and memorize commands; there was no alternative.

Today, everyone prefers the dazzling screens that Windows and OS/2 provide...but most BBS programs still display the same drab, confusing text menus that the first programs did.

The information superhighway is full of exciting stops; no one has to call your BBS anymore. If they see cryptic text menus, they won't call back. You have to give callers the dazzling graphics and intuitive menus they prefer. That's why you need *Searchlight 4.0*.

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The Remote Imaging Protocol by TeleGrafix gives callers the graphics and mouse support they expect; that's why callers prefer RIP. That's why BBS developers are scrambling to add RIP—and telling everyone that their RIP is "as good as Searchlight."

Well, talk is cheap—and seeing is believing. It's easy to see who the leader in RIP support is...look at our competition and keep asking: *"Where's the RIP?"*

Other companies love to tell you how good their RIP support is. But they hate to show it to you in their ads, brochures and test drives. They won't show you their RIP support because they know they can't match ours. Because nobody can.

*"Searchlight is doing a marvelous job incorporating RIP into their BBS"*

**Boardwatch Magazine**  
**July, 1994**

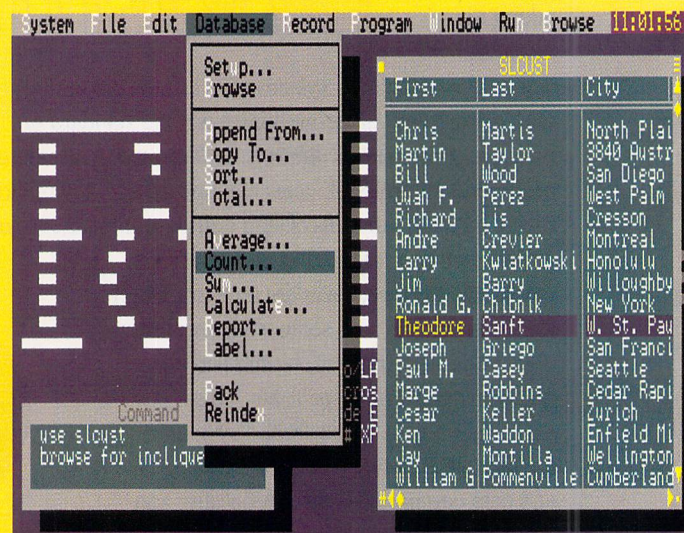
The working scroll bars in *Searchlight 4.0* let you scroll through a message, file or directory list with your mouse. You can select messages, tag files, set options and run commands just by clicking with the mouse.

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And 90 days after TeleGrafix releases the RIP 2.0 protocol, we'll introduce *Searchlight 4.5*—the first BBS program that supports it.



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If you want custom menus, some companies make you buy their script language and write routines in it. That's not customizing—it's programming.

We think our engineers—not our sysops—should write the code. Our menu editor lets you put any command (we have over 100) on any menu. You can nest menus 40 levels deep and add doors to any menu—even build executable menus that run lists of commands.

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*The automatic menu generation in Searchlight 4.0 lets you turn any RIP screen into a custom menu*

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Your callers will love the things that *Searchlight 4.0* can do. You'll like the things Searchlight Software won't do.

We don't sell "Digiboard" or "network" versions—support for intelligent multiport cards and LAN software is **free**. We support Internet addresses; just add your favorite utility.

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We even include the freeware version of RIPTerm (TeleGrafix's RIP-compatible terminal), so you can help all your callers "get RIPPed."

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**PC Magazine  
June 14, 1994**

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Source: CRN February 21 & 28, 1994 / The Gallup Organization



\*Other 28.8 K modems have 4 to 1 data compression to achieve 115,200 bit/s. OPTIMA 288 has 8 to 1 data compression for 230,400 bit/s. The speed you achieve will be affected by your computer systems, communications software, and the compressibility of data being transmitted. To achieve maximum speeds, two Hayes OPTIMA 288 high-speed modems must be used. \*\*Fastest in four out of five file transfer tests. CRN /The Gallup Organization Inc. 1993.

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John:

*For some reason we tend to give readers the impression that there is an organized, planned approach to comprehensive coverage of online issues in Boardwatch. I don't know where they got that idea, and I don't know how to stop it. But your question is fair enough.*

*There are two reasons why we don't currently have an AOL column. I've had a couple of business encounters with the people who run AOL, usually at arms length, and I've found that I just don't like them. They are standoffish, snobbish, and convinced that they ARE the online superhighway. Their arrogance is Olympian and they do seem to be a legend in their own mind.*

*The second reason, and probably the more important one, is that I haven't found anyone who writes in a style and fashion I find acceptable in the pages of Boardwatch and on the topic of AOL. Since I have neither the time nor the interest in writing one myself, we don't have one.*

*If we do locate an incredibly bright, perceptive, insiteful AOL user who can write cogently and cares to in these pages, I will probably get over the fact that I personally think the people who run AOL are a bunch of carpet shampooers who stumbled into an equipment room by accident, and we'll resume the column. Until then, they're out.*

Jack Rickard

♦♦♦

#### WINSOCK ACCESS WITH SHELL ACCOUNT

Hi,

Great Magazine!

I noticed the section in the Jan 95 issue about Views of the Solar System. I wanted to point out another Internet astronomy service, ours! I'm one of many people who help run a High Energy (Xray and Gamma Ray) astronomy online service. You can reach us at <http://legacy.gsfc.nasa.gov>, gopher to [legacy.gsfc.nasa.gov](mailto:legacy.gsfc.nasa.gov), ftp to [legacy.gsfc.nasa.gov](ftp://legacy.gsfc.nasa.gov), or telnet to [legacy.gsfc.nasa.gov](telnet://legacy.gsfc.nasa.gov), login: **xray**.

If you use either the www or telnet accesses you can use our database system which lets you find out information about different xray astro missions, the data collected, etc. We also have a large number of pictures. For the non-astrophysicist the best choice would probably be our www site.

Also, you had talked about COMT and anti-COMT in the letters section. It's not quite that, but, there are a few packages which will work with a unix shell account to give you winsock access without slip/ppp. Two of

them are Remsock(\$15) and The Internet Adapter(\$25).

Another choice is SlipKnot which is a browser which doesn't need winsock. Remsock is at <ftp://osionett.no/Shareware/Windows/Comm/remsock.zip>. TIA can be gotten from [tia-info@marketplace.com](mailto:tia-info@marketplace.com). SlipKnot doesn't have set pricing yet and is at <ftp://netcom.com/pub/pbrooks/slipknot>. I haven't personally used any of these, though I have heard nice things about TIA.

Thanks!

bruce  
[Oneel@clark.Net](mailto:Oneel@clark.Net)

♦♦♦

Bruce:

*I think we've got a review of TIA going in this issue. The concept of browsers that can use inexpensive shell accounts as an alternative to pricier SLIP/PPP accounts has merit. Thanks for the heads-up on your service and these programs.*

Jack Rickard

♦♦♦

#### COMPUSERVE RIP-OFF

Jack,

Thanks for the great magazine, as a sysop here in Spain I can't imagine being without it. I could go on and on about how much I like your magazine but I'm just too fumed.

I suppose by now you got word about the battle, another David and Goliath story - Telegrafix vs. CompuServe-Unisys. It's typical but it riles the heck outta me. I've got a six line TBBS system here in Spain and thanks to RIP it's (in my not so humble opinion) the best in this country.

They've been keeping us waiting for RIP 2.0 and now they tell us it's because CompuServe wants royalties for the use of the GIF format. After all these years and thousands of shareware programs later they want royalties. Next thing you know they'll have their lawyers going after all those programmers. Talk about hard up for cash, I mean, haven't they got enough yet?!

I feel like I've been used. For 7 years GIF was 'the format' we used it because it was 'free' or so we thought. Now that we, the online community, have made GIF the industry standard they want us to pay. I say no way, I'm indignant, I'm adamant, I'm fighting mad, and as soon as I get my hands on Maury Cox's (CompuServe prez.) Internet address he'll be hearing from me personally. I also would like to encourage anyone else who feels as I do to do the same.

Jim Shaffer  
CiberLinea BBS  
[jim.shaffer@ciber.es](mailto:jim.shaffer@ciber.es)

♦♦♦

Jim:

*The good news is that Pat Clawson called during the final week of January to note that RIP 2.0 was in fact shipping. You're fixed.*

*On the wider issue of the GIF format, I would have liked to have covered that LAST issue and may not until NEXT issue. I have to confess that I know a good bit more about this than I quite understand. CompuServe and UniSys both seem pretty cogent at issuing conflicting and updated positions on this on a nearly hourly basis. The history of how it happened brings up more questions than answers. And there is the underlying question of these "sleeper" patents applied to software which I don't think are nearly as resolved as some would have us believe and I'm a little uncomfortable as to whether they will ultimately be resolved in a satisfactory fashion.*

*Beyond the patent question, I do believe CompuServe has worded their documents such that we must assume some avarice and some desire to assert some rights over a file format they clearly and without any confusion did deed to the public domain earlier. It's rather piggybacked on the patent situation.*

*But on a wider front, I think we might want to look at the necessity of GIF. We opted to use JPEG compressed graphics for putting the entire text of Boardwatch with the photos and graphics on our Web Server. JPEG (Joint Photographic Experts Group) is a graphics format that allows you to compress graphics images as small as you like - with some corresponding loss of definition the smaller you make the image. Since GIF seemed to be the format of the day, we went to some extremes to explain what JPEG was and where to get a viewer to tack onto your Web browser so you could view our graphics. We've since removed this advisory. JPEG is built into NetScape, our current favorite in browsers and one that is clearly becoming the dominant one online.*

*It would seem that in just a very brief 60 day period, we've watched JPEG take over Web sites with unparalleled speed. To me, it seems you get better definition with smaller files and it's very easy to have the postage stamp sized image that you click on to view the larger one. This is becoming the technique on Web servers. So at this point, I'm guessing that if the BBS community had as many tools for viewing JPEG as it does GIF, it would be a done deal. So do we need GIF at all? Is it maybe a little old and tired at this point?*



*For what its worth, RIP 2.0 contains support for JPEG. So while I agree that it is deceitful, mean-spirited, and poor strategy on CompuServe's part, I suspect in the end they will be appropriately compensated for the move. And it might even be to our advantage to have such a catharsis to move us to a better graphic image format anyway.*

Jack Rickard

♦♦♦

## INTERNET PUZZLE

Dear Jack,

Don't know whether I am becoming more involved or your mag is getting better, but I suspect a bit of both. I've been fretting with the Internet, got access via The Nashville Exchange, FTP'g & Telenetting with no sweat, and SLIP just keeps slip-sliding away. TNE has a menu selection for those three, and it is the SLIP that is my problem. I'd read Internet for Dummies and found little that helped with how to connect once you acquired a SLIP.

TNE's learning, too, so I've been pretty much on my own. Lo and behold, yesterday's mail brought the latest BOARDWATCH. Well, it hasn't answered every question I have, but it sure laid out the compass. Tomorrow a new 486 arrives. I have gotten Trumpet Winsock and Mosaic. By this time next month I intend to have improved my grasp of the Net by a reasonable factor.

With all the above said, I at times wonder why in the world I pursue this rather dizzying and intimidating problem. I am 63 years old, and though I do earn my keep with the computer, it's strictly in word processing mode. I enhance that a bit with PageMaker, but being a self-employed one man business, mastering the Internet probably will be of small use to my future - except I am fascinated by puzzles, the crossword kind and the computer kind. I can't think of a better mental exercise to keep one's brain muscle limber and growing. So I am a white-headed cyberfan - I cringe at "cyberPUNK." My generation thinks of that as a pretty demeaning term.

There is a pessimistic view I hold, considering the rapid rise in interest and the increasingly simpler (GUI) methods of accessing the Net. There is an analogy here to universal literacy, especially the quasi-functional kind as experienced in the USA. In simpler times, before the great population explosion brought about by the Industrial Revolution, literacy was an art that was commonly possessed by uncommon people. And the market these uncommon people created contained literature as opposed to printed drivel. Once the push for universal literacy got underway, the market expanded to exploit the more mundane

tastes of the common people. In the final analysis, the lowest common denominator places the highest demand on supply and is therefore catered to by increasingly larger uses of raw materials. So today more paper is devoted to comic books, pornography, and trash journalism than to more intelligently crafted writing.

I note the same course of events in computers and the Internet. Pornography, trivia, and plain silliness take up an increasingly larger portion of the bandwidth. Reading this one may think me an elitist. Well, I probably am. I certainly believe in an aristocracy, but the natural aristocracy of the competent, and thus, I guess, I am an elitist.

The second contributing factor to my pessimism comes from a certain knowledge that, given the acceptance of the above state of affairs, many of my fellow "elitists," decrying the degradation of society, morals, literature, etc., will pass laws to "uplift" one and all and prevent us from being damaged by all this common commonness.

Well, it's just too late for that, and the cure is MUCH worse than the disease. I'd much rather complain about the difficulty of finding good reading matter, or worthwhile TV, or useful FTP sites, than complain about the moralistic super-government that censors and controls all that I can access. One of the requirements of individual liberty is that one must grant it to all or to no one, including oneself. Everything has its price. I'll gladly pay the price by accepting the existence of that which I despise rather than live in a society in which Plato's Philosopher Kings rule. I think Jefferson, et al., sort of had that in mind way back when.

Ray.Walker@Nashville.com

♦♦♦

Dear CyberCenior Walker:

*I couldn't agree more without getting red in the face and tearing out my hair. But perhaps I might "here here" you a bit with the aspect of all this I find most dear.*

*I am unapologetically elitist and have had little reason to question an age-old assertion that about 15% of humanity is capable of being educated. I believe it to the bones and I'm not even certain it isn't modestly harmful if not at least difficult to watch for any of the 85% to go through the education process and then try to wear it in public. Further, about 85% of all that is printed, transmitted on tv, radio, or by telegraph is utter drivel that can't be terribly important even to those who create, transmit, or consume it.*

*The problem is, WHO gets to pick the 15% - either of that which is valuable in communications, or those who should receive the education? ANY filter mechanism holds not the*

*potential, but a CERTAINTY of abuse, that it will accidentally filter out the teen prodigy who by an accident of life lives in the wrong place, wears the wrong clothes, chose poorly heeled parents, or is otherwise filtered out erroneously. Similarly, in the process of publishing, if we strive to only get the 15% that is valuable, the process by which we do that will cause many valuable things to never be published. It is utterly inherent with the first step toward doing so.*

*Yes, I cringe at MOST of what is online. Worse, I'm often called on to DEFEND it when I can't even read or look at it without waves of nausea and a sense of wonder at the waste of human time and intellect it took to create such sadly twisted excrement. I don't even defend to the death their RIGHT to say it. But any filter mechanism might shut out the next Mark Twain. The next truly novel form of writing might never happen. The next seminal software program might never be released. In some cases we don't even know the effect it has on our world for one 15-year-old kid to have one "connected" experience or what he'll ultimately do with it 40 years later. He may visually map the universe for us all because he saw a fat chick with a donkey online as an adolescent. Tough to tell.*

*You have to kiss a lot of frogs to find the princes. But let's don't outlaw frogs. We need princes. Celebrate the pearls you do find online CyberCenior Walker, and let the swine bury the swine. (A couple of years ago I'm sure I could have gotten one more mixed metaphor in there but I just plumb gave out tonight).*

Jack Rickard

♦♦♦

## CHILE BBS

Hi Mr. Rickard :

This message comes from the biggest BBS in Chile, HOMENET. We recently moved to our new offices and also grew from 16 to 24 lines.

We run a Major BBS vers. 6.25f completely in spanish (also in english) and we would like to invite your spanish and latin readers to connect our BBS in RIP or ANSI up to 19.200 bauds.

Please try to advise our phone numbers:

56 2 341 2007 for 14.000

56 2 341 2008 for 2.400

Thanks for all, and merry Xmas and a very happy new year for you and your outstanding magazine.

PD. sorry, my english is awfull.

See you;



Carlos Marsh  
capitan@sisoft.cl

\*\*\*

Greetings Mr. Marsh:

*No problemo. As you can see, my Spanish sucks too. I'm encouraged to learn of a 24-line system in Chile. Congratulations on your success and our hopes for more activity in your area.*

Jack Rickard

\*\*\*

## GLORIES OF THE WEB (MINOR I TOLD YOU SO)

Hi Jack. I read with considerable pleasure your editorial from your December BoardWatch Magazine. I read it on your web server, actually. I say considerable pleasure because I wrote to you many months ago (Mr. Wyse-50), telling you how cool the Web and Gopher were, and how very significant a thing the global interconnection aspects were. You didn't poo-poo the idea, but you didn't seem to quite catch it. Such childish pleasures aside, though, what \*really\* pleases and excites me is watching how much the Web / Internet is penetrating into the public conscious, is watching the vast panorama of web resources flooding the net. Every day I scan the Web I am tickled to death by how much it is really happening.

Every day I see astounding new things on the web which just blows me away! And this is all while HTML is still in its gestative stages.. when we see wide deployment of HTML 2 and HTML 3, along with secure transactions (a la Netscape's RSA Secure Sockets Layer), who can imagine the wonders to come? I have seen a company promoting a product called Virtual Places which provides an adjunct server to a web server, which can host virtual rooms.. essentially a multimedia MUD/chat environment that is welded to the web. They are doing this thing up as a relatively expensive commercial product targeted at formal groupware / conferencing, but if they can do it, the Internet hacking community can do the same. The global, totally programmable interconnectivity of the Internet when combined with the Web infrastructure promises wonders untold. I imagine one day we'll have A.I. systems collaborating on the Internet.

But I froth at the mouth.

Let me tell you a piece of the relatively near future as I imagine it. I see some really clever intreprenuer pulling together some venture capital and building a \$1000 box that acts as nothing more than a Web server with a really intelligent web design system. Heck, maybe \$2,000.. it's unclear how much you could strip down a PC and still have it

serve as a feasible web server, nor that you could do really good things by building a dedicated machine, although the thought of a dedicated web system appeals to me greatly, if only for the simplicity that it could bring to the endeavor for the user. It might take some considerably fancy user interface work, and it would be dependent on ISDN services being available for the cost of a business phone line or two (as they are here in Austin, depending on when you sign up), but it could happen. Let every business have a web machine, just as they have a credit card authorization machine.

Get the Chamber of Commerce for a city to serve as an index web, and you have simultaneously put the yellow pages out of business, given businesses fluid and flexible control over their information distribution, and given consumers the ability to get far more information when they want it, where they want it. Aside from the people making money on selling these boxes and the whole new marketing industry that we are already seeing aggressively blooming on the web, imagine how democratizing a development this could be. The Web could make direct, saturation marketing much less prevalent.

Businesses could just do their own publication and let interested consumers come to them. In addition, the original web model included the concept of public annotation servers. The basic idea was that when a browser accessed a web page, it also polled a remote database to see whether anyone had made any comments about the URL in question.

Imagine ads on tv with a little button saying "click here to see what people have said about this ad or this product". Imagine the kind of dynamics that could occur!

This annotation thing is a subset of the SOAP scheme that the Interpedia folks are promulgating. The idea is that you could filter the web by basically saying "give me a list of web pages relevant to this topic that have been given a Seal Of Approval by this consumer organization or that chemical peer review society". Instantly, the whole notion of control of the mass media to manipulate consumer opinion can be turned on its head by those folks who care to do so. Yowza!

There is a whole hell of a lot to do to make the web as powerful as we'd all like. Cataloging, classification, and semantic indexing schemes. Automated caching and replication of information resources. How to have Web pages clean themselves up when a linked resource drops off of the net. Resolving all of the copyright and legal issues that are coming up now just as they came up when the printing press came out. The Web is not Mr. Nelson's fabled Xanadu, and doesn't have all the niceties (necessities) that Xanadu was to provide for arrang-

ing for payment for access to resources. This is a problem.

The lawyers will be busy.

But society in general seems to be rushing to the Web with enough momentum to seriously shift some paradigms around. And this is why I am so excited. And why I am so immensely gratified and thrilled that you are as well. Reading your editorial is just the latest and most personally fulfilling sign that this really is important and really is as significant as I have thought from the beginning. Hell, that's bullshit. I had no idea that all this would happen. But I hoped.

And I hold enormous respect in your perspective and intelligence. Slow up-take on the web notwithstanding. 8-)

Well anyway Jack, my cup is running over. I invite you to web on over to the web server I administer at <http://www.arlut.utexas.edu/home.html> and check it out. I'd certainly understand if you didn't, there being so very much stuff out there, but I think we have a pretty class (if modest) act. In the end, it is really irrelevant, since our links point to the same seething mass as everybody else's. And there is the power and the glory of the web.

With religious fervor a-blazing,  
I am yours, sir.

Jonathan Abbey  
[jonabbey@eden.com](mailto:jonabbey@eden.com)

\*\*\*

Jonathan:

*Mosaic looks to me like it was first released for Windows in November 93, and we covered it in our March issue - how slow were we? My main reluctance with the Web is its staying power - and I still believe that communication is the key, not information display. Your virtual MUD's are a good indication that it is easily extensible to support communication and I don't think we have even seen the Web catch fire yet like it will when Web sites do a better job of that.*

*As to cheap Web Servers. The Boardwatch web site you mentioned (<http://www.boardwatch.com>) runs on a 386SX 20 MHz machine that lays on its side and we can't find the cover or most of the pieces for it. It runs on some software Gary did in Visual C++ in a couple of weeks running under Windows 3.1. It handles about a thousand readers per day (not document hits - people). We'll probably move it to a 486-66MHz machine under Windows NT Workstation as soon as we're through playing around with NT on that machine. Our link is a 56 Kbps leased line we were very proud of a couple years ago. Now you can get 115 Kbps on an ISDN connection at much lower cost. It looks to me*



like you can do a modestly competent web server for about \$500 and we didn't have any investors at all.

*But I agree the one thing this does is make it all new again. We should see an absolute cornucopia of new tool development to take advantage of the connectivity of the Internet and yes, WWW. There are 13-year-olds with compilers out there that will ultimately be the millionaire software developers a couple of years from now. Exciting times.*

Jack Rickard

♦♦♦

## BIANCATROLL'S

Ho there!

I'm writing about an article I've heard was printed in your most recent issue. The article was written by Harley Hahn and someone else I think. For some reason I can't find an issue of Boardwatch more recent than October around here, so I've only had the part about the smut shack read to me by a friend.

Anyway, it was a great article and I really liked what was said about the shack. The only problem is that the authors, I think, never actually contacted anyone working on the project, and got a few vital facts wrong. I'd like to get in touch with them and maybe rectify the situation if possible.

The main, actually only, problem is that they didn't mention all of the people involved. First they didn't mention bianca, except to say that she is a young woman, who doesn't really exist. Actually, she's an old woman, and she does exist. Second, they only mention me and Chris Miller. Actually, there are about 8 people who regularly work on the shack and they all deserve to be mentioned. In addition to bianca, Chris, and myself, they are Jill Atkinson, Kevin Moore, Kim Pineda, Paul Kuzma and William Pietri. All of these people have contributed a great deal, and deserve mention. Could you do me the favor of either a) forwarding this to the authors or b) sending me their email so I can write to them? Twould be much appreciated.

Thanks!

thau, a troll.

Thau@thoughtport.Thoughtport.Com

♦♦♦

Hidey Ho Neighbor:

*Oh, let's just print the thing and be done with it. Credit where due thau, even for trolls.*

Jack Rickard

♦♦♦

## USE ANY COMM PACKAGE OVER SLIP !

Dear Jack,

I recently stumbled across what may be an incredibly significant piece of software. As you may know, SIO is a quite wonderful high performance rock solid OS/2 comm driver replacement. It works with my slip connection, OS/2 and windows (via win-OS2) comm packages. (It even supports my hayes ESP-2 card, something Hayes does not!) It is the best \$15 I have ever spent on a piece of software.

Now for the gold. The author (Raymond L. Gwinn) has quietly implemented a small enhancement to SIO called Vmodem. In a nutshell, once your SLIP connection is up you start a virtual modem program. It sits there like a comm port (or two) with a virtual modem attached to it. You can then use any DOS, windows, or OS/2 communications program that you would use to call a bbs, point it at the virtual comm port and "atdt" to an internet address of a similarly configured BBS!!

Setup took me about 5 minutes including reboot time. I'm stunned at how well it works. It was designed to work with Warp, but it runs just fine on my 486/33 OS/2 2.11.

I have never written a magazine before, but the implications of this product to bulletin boards is breathtaking.

Thank You

Glynn Taylor  
gtaylor@clark.net

♦♦♦

Dear Glynn:

*Thanks for the tip on the new SIO capabilities. Ray Gwinn is one of the most enduring and unsung heroes of PC communications. He was a key part of the development of the Fido Opus Seadog Serial Interface Layer (FOSSIL) that made about half of the communications and BBS software ever developed possible. He actually wrote a .SYS device driver implementation of it titled X00 that I still use for the occasional odd thing and I completely believe it was one of the best comm utilities ever crafted. I've met Ray and he's one of the quietest, most unassuming and modest people you will encounter in this milieu - part of the reason he's a national secret.*

*In recent years he's moved to the OS/2 platform which in my estimation is unuseable for communications purposes without Ray's SIO program. That he would continue to enhance it in cunning ways for TCP/IP purposes comes as no surprise. But I am very pleased he's still active in this arena.*

Jack Rickard

Jack,

Hello there. My name is Carlo Costanzo. I have been an avid reader of your magazine for about 2 years now.. I used to be a SysOp but due to financial difficulties and a lack of time I decided to let it go, But I still read your great mag as a USER now. :) One thing I would really like to see in your magazine is a little more information on how to get 'WEB' access .. I understand that I need a SLIP or PPP connection, but where can a person get one of these. I always see a full page ad for the UUCP providers but that is for sysops only. What about us users that want to get a link? Can you provide me with a short list of providers in the New York City area that could help me get into the NET via Dial-Up? is it Possible or am I DREAMING? Any Information You could give me would be greatly appreciated. I'm DYING to see the BoardWatch Home Page!! Thank You in advance for any information you can provide. I'll Keep an eye out for your reply! :) BTW: Thanks for a Most Excellent Magazine!

Sincerely,

Carlo Costanzo

X18KB@CunyVm.Cuny.Edu

♦♦♦

Carlo:

*Granted. See our list of SLIP providers in this issue. UUCP is gone. SLIP is in. By your command.*

Jack Rickard

♦♦♦

## GREAT MAGAZINE

I have to admit, I just picked up my first issue of BW. I have to say that this is the most helpful computer magazine I have found. Being a Sysop of a dial-up BBS, the article by Lance Rose "Leagally On-line" is by far the most informative article of BBS legal E's I have read to date.

I have cleared a spot on my rather cluttered desk which now holds my issue of BW. A space which is now permanently reserved. Thanks a bunch for a great publication and keep up the good work.

Best Regards,

Dennis Phillips

lestat%podbox.uucp@cs.utexas.edu

Sysop Merri-Mac BBS

Austin, Texas

♦♦♦

Dennis:

*We appreciate the space reservation. Desktop real estate comes dear I know. We intend to use it well.*

Jack Rickard



Mr. Rickard,

My wife and I have been reading your magazine for several months now. I am thoroughly impressed, amused and entertained by your periodical. I especially enjoy the letters to the editor section. You are a "smart ass" and "straight shooter" after my own heart!

We started a BBS called The Stitchers Source in September. It was a last ditch effort to find a common interest between the two of us (we have been married for 5 years, together for over ten years and have two young boys. Like we needed more frustration!! :->).

In any event, your magazine convinced us that we were crazy to do this (run a BBS), and since we are acutely insane, we decided to proceed at full throttle and make this thing work.

I know that you are "enamored with special topic systems" so I decided to drop you a line. We cater to the stitching and crafting community. We decided early on to make this an entirely free system (to our users that is!). No upload/download ratios (I hate that!), no fees, no dues and no hassles!

(end of shameless plug!)

In the words of thousands of other Boardwatch Minions:  
"Keep up the great work!"

Mark & Lesa Steele  
**Metalax@checksix.Com**  
Stitchers Source BBS  
(714)589-1718

♦♦♦

Mark:

*Pleased to learn of the Stitchers Source. Yes, you're crazy. But it's a dry crazy. It's kind of touching that you do it together. Full throttle would be about the right way to do it.*

Jack Rickard

♦♦♦

## BBS PIRACY

The rate of BBS software has been on a 90 degree turn in the direction of up in the last few years. The price of this software is disgusting. Wildcat! 4.0 Single Line is at least \$150. MajorBBS ver 6.21 2 Node is about \$150 also. Why do they keep joking the life out of us? Do the big software company's like Mustang and Galacticom want the big wigs to keep the high technology all to themselves? Or is this merely due to software piracy with these BBS programs? I would like to know, because I'm frankly reemed about it all.

Thank You,  
Nick Dibble  
**Ndibble@komets.K12.Cfa.Org**

♦♦♦

Nick:

*Yeah, me too. It ought to all be free. Why don't you spend about a year writing one, put in 40 or so telephone lines to handle the calls from the BBS operators who want it fixed, and give it away. You could probably bury those greedy bastards real quick. I'll run a ten page color spread on it in Boardwatch for free too and we'll give away all the copies of this final issue of Boardwatch for free too. We'll do it all from a BIG cardboard box in a field. Life sucks, don't it Nick?*

Jack Rickard

♦♦♦

## TIME ONLINE

Hi Jack,

Just writing to let you know that I really enjoy your mag as a sysop and online person. It's got a lot of great info and the down-homesiness of a fishing magazine. Your letters column is worth the price of admission alone.

I work at Time Inc. and was delighted to see how much you loved their Pathfinder home page! I'll make sure everyone there sees the writeup (if for some weird reason they don't buy Boardwatch). Time Inc is often portrayed as a stodgy media institution, like an extension of a government agency, but I know there is a digital revolution quietly sweeping into the place. I'm glad you noticed.

This is also to let you and your readers know that my board, Streame Online, has merged with another board here in NYC called Tree Branch, and that BookStreame Online Publishing can be found on Tree Branch Online starting in December 1994. You can reach Tree Branch at 718.739.5845. We run TBBS and hope to have an IPAD and full connection to the Internet in '95. Check us out!

Also please change the Streame Online listing to reflect the new access phone  
**718.739.5845.**

Thanks.

ed strosser  
**sysop@streame.com**  
**ed.strosser@treebranch.com**

♦♦♦

Hello Ed:

*Loved their Pathfinder home page? Who are you talking to? I detested it on sight. I do a*

*magazine covering bulletin boards, the Internet, and online services for eight years and Time Magazine, who heard about the online community about last February, already has a WWW site that looks better than mine! (<http://www.timeinc.com>) As Nick would say - I'm reemed. Who at Time actually did the design of that thing?*

Jack Rickard

♦♦♦

## BOARDWATCH WWW HOMEPAGE

I just loved the December issue of Boardwatch and think that it will be the bible for many of us for at least the next few months. Please tell Jack that I too am webaholic. When I first saw an ansii screen it was great. Ansii is much better then the text we have come use. Then came Rip and I thought that this is the greatest thing to happen to BBSing since the modem. And when I had heard about sound support in Rip well you can't believe how I felt. But now we got this WWW thing and all I can say now is WOWZERS!!!

There is just one other thing that I would care to mention is that your spell checker is not working on your home page. Welcome is not Welcome ;-))

Please put in the next issue how many "hits" you got and how many messages you got about your home page.

ttyl, cya  
**John.Buying@leading.Org**

♦♦♦

John:

*We're doing about 7000 "hits" per day from about 1000 individuals. Looks like about 7 documents per person which is kind of interesting.*

Ditto WOWZERS.

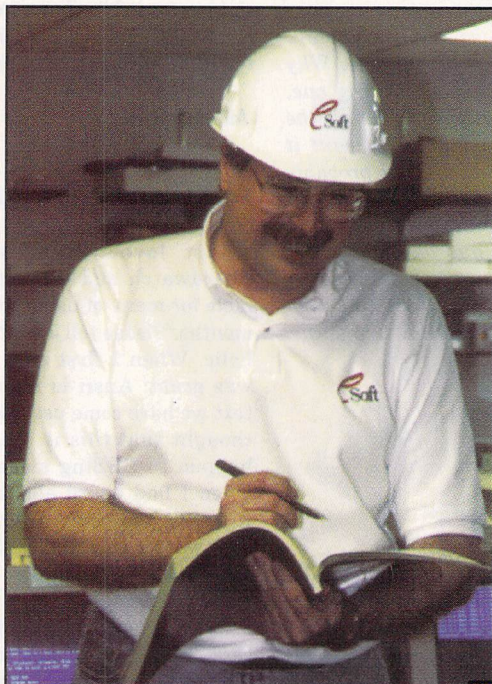
Jack Rickard

♦♦♦



# TELEBITS

- eSOFT SHIPS TBBS VERSION 2.3
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- HERE COMES THE KNOWBOTS
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- CLOCKLESS PROCESSOR
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- MINICARTRIDGES WITH BIG CAPACITY
- OCR FOR LONGHAND
- FLASH MEMORY VOICE RECORDER
- LCD TV AND QUAD-DENSITY CD ROM FROM SANYO
- FISHER 24-DISC CD ROM CHANGER
- WS WATCH - TCP/IP NETWORK MONITOR FOR WINDOWS
- LONG DISTANCE WARS



**Phil Becker, President  
of eSoft Inc.**

## eSOFT SHIPS TBBS VERSION 2.3

by Jack Rickard

eSoft Inc. announced shipment of version 2.3 of their BBS software package, The Bread Board System (TBBS) January 23, 1995. This was the first upgrade to TBBS since November 20th, 1991 - over three years. The company last year had projected a release date of August 1994 but delayed until after the first of the year. TBBS aficionados have not really suffered a three year hiatus on new toys as new features have been added to the platform via "option modules" - add-on programs to perform various tasks such as an enhanced chat function (**ULTRACHAT**), outbound modem connections and links to other machines (**INTERCHANGE**) released in the interim. But the basic engine has been in service for over three years without an update.

The new version abandons support for 80286 and older computers, and now requires an 80386 or better microprocessor. The gain is performance with TBBS 2.3 reportedly over 50 percent faster than the previous 2.2 version and also makes way for a version of TBBS capable of servicing 96 separate telephone lines from a single IBM compatible PC. A few of the highlights of the new release:

**NEW FILE AREA INTERFACE:** The old TBBS was functional but plain when it came to file downloads. The new version 2.3 provides a full screen file area

interface that allows tagging and downloading of batches of files, searching for files in various ways, and generally grabbing files by pointing at them and adding them to a batch that can be downloaded in one operation. TBBS was far behind competitors such as PCBoard and Wildcat! in this particular function and with the 2.3 release is back in the game with a super file download function.

**LAN LOGONS:** The new version includes a sophisticated IPX logon function allowing Novell Netware users to logon to TBBS over the LAN much as they would by direct dial. TBBS lines can be designated as IPX lines and assigned logical names either individually or as groups. Multiple lines within a group form a "hunt group" for LAN access. A loadable device driver titled TIPX comes with an interrupt 14 client program. You can use a standard terminal package such as Qmodem to logon to TBBS via the LAN.

**USERLOG:** The number of callers that can be registered on a TBBS system has been expanded from 65,535 to 4 million.

```
Area: New Uploads, Not Cataloged      Batch: 1 files, 8K
eSoft Support Board - New Uploads, Not Cataloged      Xfer: 0:01 Zmodem-90
NOTE: All downloads are contributed by other users.
Please contact the contributor for information or support.

11  GSIPAY17.EXE 223K 1-16-95 1-16-95 1-16-95 1-16-95 1-16-95 1-16-95 1-16-95 1-16-95
12  ABS DEMO.EXE 112K 1-16-95 1-16-95 1-16-95 1-16-95 1-16-95 1-16-95 1-16-95 1-16-95
13  OFFLINE.ZIP 21K 1-16-95 1-16-95 1-16-95 1-16-95 1-16-95 1-16-95 1-16-95 1-16-95
14  RIPNUM.PRG 520 1-16-95 1-16-95 1-16-95 1-16-95 1-16-95 1-16-95 1-16-95 1-16-95
15  NE2000.COM 21K 1-16-95 1-16-95 1-16-95 1-16-95 1-16-95 1-16-95 1-16-95 1-16-95
16  LANTIPX2.TXT 4K 1-16-95 1-16-95 1-16-95 1-16-95 1-16-95 1-16-95 1-16-95 1-16-95
17  RONCO103.ZIP 15K 1-16-95 1-16-95 1-16-95 1-16-95 1-16-95 1-16-95 1-16-95 1-16-95
18  PCBM5G25.ZIP 405K 1-16-95 1-16-95 1-16-95 1-16-95 1-16-95 1-16-95 1-16-95 1-16-95
19  TERM14A.ZIP 8K 1-16-95 1-16-95 1-16-95 1-16-95 1-16-95 1-16-95 1-16-95 1-16-95
20  EC11.ZIP 53K 1-16-95 1-16-95 1-16-95 1-16-95 1-16-95 1-16-95 1-16-95 1-16-95
21  STATSMPL.ZIP 53K 1-16-95 1-16-95 1-16-95 1-16-95 1-16-95 1-16-95 1-16-95 1-16-95
22  RESET.ZIP 25K 1-16-95 1-16-95 1-16-95 1-16-95 1-16-95 1-16-95 1-16-95 1-16-95
23  NREHEAT.V23 8K 1-16-95 1-16-95 1-16-95 1-16-95 1-16-95 1-16-95 1-16-95 1-16-95

<Space> = Add/Del file to/from batch      *D/D = Download file/batch now
<Enter> = Display file info              * after number = file is in batch
0 = Other commands available              ? = Help, <Esc> = Exit to area list
```

## New TBBS file interface

**CD-ROM SUPPORT:** TBBS now supports use of CD-ROM drives both as local drives and LAN drives with staging of files to accommodate good file download performance.

**NETWORKED MAIL:** Message areas revised to allow many functions to operate in a wider world of mail rather than assuming local delivery. For example, CC: lists can now include FidoNet or Internet addresses.

The new version also raises the entry level product line count from two lines to four lines at **\$295**. Upgrades for the two-line users are **\$75** and automatically include the upgrade to a four-line version. Upgrades for other line counts are **\$150** for the 16 line version, **\$175** for the 32-line version, and **\$200** for the 64 line version. Pricing for new purchasers is **\$295** for 4-lines, **\$895** for 16-lines, **\$1495** for 32-lines, **\$1995** for 64-lines, and **\$2595** for the new 96-line version.

Most of the excitement among TBBS operators centers not so much on the new release, but on the Internet Protocol Adapter still in beta test. The IPAD is a hardware/software package that provides



Internet connectivity. The package provides telnet and ftp access both to and from the BBS, SMTP mail, POP Mail server, SLIP/PPP connections, domain name service, a web server, and router all in one box. It will take advantage of the TBBS TIPX LAN logon to eliminate serial cable connections and allow Internauts to telnet or ftp into the BBS, BBS callers to telnet or ftp out to the Internet, and further allow the BBS operators to offer SLIP/PPP dialup accounts to their user base. One beta tester in Chicago is already using the device to offer 115 Kbps ISDN SLIP/PPP connections to the Internet. The device allows you to become an Internet Services Provider without any Unix system at all. eSoft began taking orders for the IPAD last November but the first shipments aren't expected until late April at this point.

In the meantime, eSoft has been offering a two day class on the Internet in Denver at **\$295** on a monthly basis and filled the first three to capacity with 40 BBS operators attending each session to get a leg up on the Internet learning curve. The class is pretty hands on with a demonstration of wiring up an actual Internet in the room, demonstrations of how routing works and what some of the issues are, and finally how to connect this in-house Internet to the wider world of Internet via a 1.544 Mbps T1 leased line connection. Classes are currently scheduled for March 23-24, April 27-28, May 25-26, and June 22-23. eSoft, Inc., 15,200 E. Girard Ave., Suite 3000, Aurora, CO 80014; (303)699-6565 voice; (303)699-6872 fax; (303)699-8222 BBS; <http://199.45.143.5>; Internet: [sales@esoft.com](mailto:sales@esoft.com)

#### INTEGRATED SERVICES DIGITAL NETWORK - WHERE ARE WE NOW?

We have not actually fully celebrated the availability of 28.8 Kbps modems with full availability of ITU V.34 modems and had a moment to bask in the glory of such a speedy connection. And already it is too slow. The breakout of the World Wide Web means for most of us a dialup Serial Line Internet Protocol (SLIP) or Point to Point Protocol (PPP) connection at 14.4 Kbps and in some few areas we are just starting to see 28.8 Kbps connections. But the graphic gluttony of the Web makes 28.8 Kbps SLIP links look ponderously slow and plodding. Rather than racing through cyberspace with our new modems, we are groping through the online universe trying to pull 12 pounds of potatoes through a soda straw. The bandwidth of this link is not going to cut it, and anything

faster is too expensive for most home Internauts.

There is a possible out on the horizon - Integrated Services Digital Network or ISDN. Its main flaw is that it has BEEN out on the horizon for nearly 15 years without ever really being introduced as a product by most of the telcos.

ISDN is basically a digital connection as opposed to the current analog telephone service often referred to as Plain Old Telephone Service or POTS. ISDN has a super advantage to recommend it. In most cases, it can operate over the same copper wires connected to your house or office now without any new installation of cabling. So it's very inexpensive for the telcos to install - whether or not they make it inexpensive for customers is another matter.

The disadvantage is that because it is digital end to end, it requires some special adapter equipment at your site - customer premise equipment or CPE. Right now there are dozens of vendors trying to introduce the next ISDN adapter and they range in price from **\$79** to several thousand dollars and do various things. But even basic voice telephone requires an adapter.

The service itself is classically referred to as 2B+D. It consists of two 64 Kbps digital channels known as Bearer or B channels, and one 16 Kbps supervisor or D channel for a total link of 144 Kbps - over five times faster than the best 28.8 Kbps modem link. A number of telephone companies have introduced various "ISDN products" on a trial basis that pared this down to 1 B+D or simply 1B channel but these are not actually ISDN.

The interesting thing about 2B+D is that it is possible to "bond" the two 64 Kbps channels into one single 128 Kbps channel. Most personal computers are limited to 115 Kbps serial port communications, but close enough. A 115 Kbps SLIP connection to the Internet is again over one of those perceptual thresholds where we move from "slow" to "pretty fast." And the World Wide Web becomes quite functional at those prices.

Some Internet Service Providers are indeed starting to experiment with 64 Kbps and 128 Kbps ISDN SLIP accounts. Pricing is all over the map but it can be as low as **\$35** per month. Since you will also have to pay for your ISDN line charge to the telephone company, which also varies, you will typically pay **\$70** to **\$150** per month or more total for an ISDN connection to

the Internet. That's still more than most of us want to pay, but for the group that just has to live on the bleeding edge of all of this, and are willing to pay a bit for it, the speed is the draw.

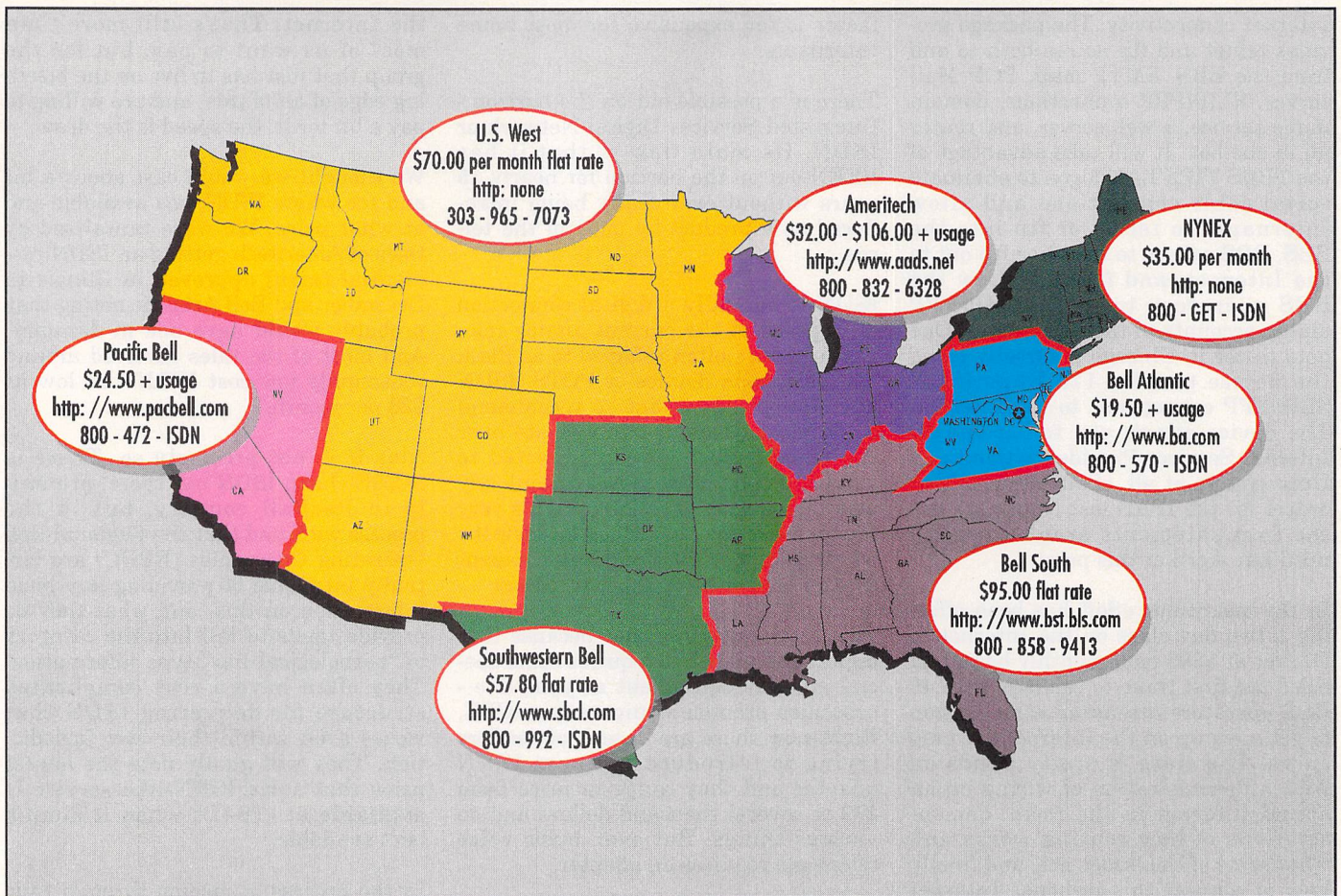
We thought we would cast about a bit and see where ISDN was available and at what price. We were tantalized by tales of Ameritech getting an ISDN residential tariff approved in Illinois in December and Bell Atlantic noting they probably would have one in January. And most of the tales revolved around reasonably low cost ISDN - as low as **\$28** per month.

Alas it is not precisely so. There is SOME cheap ISDN out there, primarily in PacBell country, but in the process we found that the Regional Bell Operating Companies (RBOC) are virtually incapable of providing any lucid information on this, and what they do provide tends to fall into the category of "pathological liar" type information. They often have a very complicated structure for delivering ISDN that varies even within their own jurisdiction. They will gladly note the lowest price that some ISDN-like service is available at (1B+D) when it simply isn't available.

In the process of piecing through this, we did find a couple of interesting services. First is Dan Kegel's ISDN page. He has amassed the most comprehensive index of information about ISDN we have ever seen with hundreds of pointers to telco web pages, hardware vendors, software vendors, other information sources, discussion groups, news groups, RFCs, and virtually anything available about ISDN. It is truly an ISDN resource. You can access the page at <http://alumni.caltech.edu/~dank/isdn/> It is the definitive resource for ISDN information.

The undisputed champion of ISDN deployment would have to be Pacific Bell Telephone, a subsidiary of Pacific Telesis, serving California and the west coast primarily. The Pacific Bell Switched Digital Services offers ISDN to residences at **\$24.50** per month for 2B+D. An installation charge of **\$150** is reduced to **\$70** if you agree to two years of service. There IS a usage charge and it is VERY strange. During weekdays from 8:00 am to 5:00 pm you pay measured rates for each minute of ISDN activity. But after 5:00 pm and on weekends it is flat rate. You can order by calling (800)-472-ISDN and they also have a BBS at (510)-277-1037 for 14.4 Kbps modem connections and at (510)-823-4888 for 57.6 Kbps access via ISDN. They also have a superb web page with not only lots of product infor-





mation, but actually an ISDN User's Manual online at <http://www.pacbell.com>

An Internet Service Provider titled PSI is offering a very interesting deal on ISDN to the Internet through March 31, 1995. They have become a reseller of ISDN for PacBell. So if you order the PSI InterRamp ISDN access to the Internet, AND order PacBell ISDN through PSI, they will sell you an ISDN\*Tek card for your PC termed the ISDN\*Tek card for just \$79. This adapter normally retails for \$299.

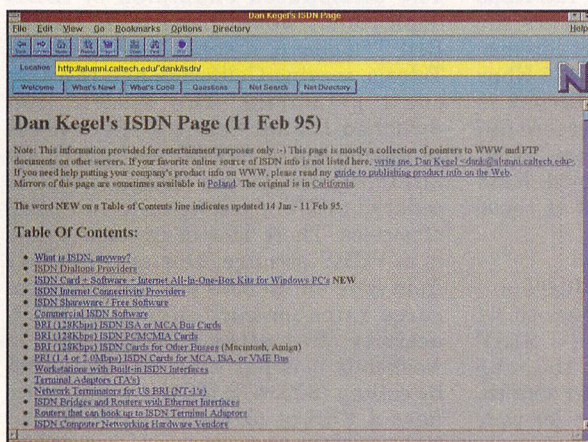
There is also a California ISDN Users Group headed by Stan Kluz, P.O. Box 808, L-550, Livermore, CA 94550; (510)423-7757 voice; (510)423-0186 fax or e-mail to [Kluz1@liln.gov](mailto:Kluz1@liln.gov)

Ameritech TeamData is making some interesting, if scattered efforts in their area covering Illinois, Ohio, Indiana, and Michigan. Aquila BBS in Aurora Illinois actually offers 115 Kbps SLIP accounts (<http://www.aquila.com>) and we actually went and looked at Chris Babb's new residential ISDN installation installed in January. As it turns out, Ameritech is installing ISDN but only in places. And they have different zones carrying different prices ranging from \$32.82 per month to over \$106 in Indiana. Installation is fairly uniform at about \$150. But measured rates are generally the same as normal telephone service, and in most Ameritech areas these are actually quite abusive. They've chopped up their entire territory into zones a couple of miles wide and apply per minute charges in such fashion that we're sur-

prised anyone in this area of the country uses a telephone at all. It's a mess. They do have a home page at <http://www.aads.net/> but it has NO information about ISDN on it at all. You can reach them by voice at (800)-832-6328 for pricing and availability.

Southwestern Bell serves Arkansas, Kansas, Oklahoma, Missouri, and Texas with a product titled DigiLine. The service carries an installation charge of \$578.20 which should slow things down a bit. The monthly charge is \$57.80 but the service is flat rate with no measured charges for local dialing. Availability is spotty but we did hear that Austin Texas is being entirely wired for ISDN in all central offices. They do have a pretty good web page at <http://www.sbc.com> You can call voice for pricing and availability at (800)-992-ISDN.

Bell Atlantic also has a marvelous web page at <http://www.ba.com> and sport an ISDN Sales and Technology Center at (800)-570-ISDN. They are pricing residential ISDN at a VERY attractive monthly rate of \$19.50 with an installation fee of \$40-\$80. But they do apply a two cent per minute charge for local ISDN and for some reason a five cent per minute charge on long distance ISDN.



**Dan Kegel's ISDN page**  
<http://alumni.catrech.edu/~dank/isdn/>



Bell South is introducing ISDN Individual Line Service at **\$95** per month with a **\$250** installation fee with flat rate usage. They have a nice World Wide Web page with information at <http://www.bst.bls.com/> or you can reach them by voice at **(800)-858-9413** or **(404)-496-2700** for pricing and availability. Currently it looks like Atlanta and Savannah Georgia have availability.

Nynex is a little behind the curve in all respects, but they would guestimate that when they do have something to offer it would be at about **\$35** per month with a **\$450** installation fee. Contact the ISDN Information Hotline at **(800)-GET-ISDN**.

US West is just now offering ISDN to businesses at **\$70** per month with a **\$70** installation fee and at a flat rate. Contact **(303)-965-7073**.

The bottom line is that in most areas, ISDN is only just now becoming available, and only in major metropolitan areas. For most of us, it is just not available yet, and it would appear that ISDN stands for It Still Doesn't Network. But the technology has a tremendous potential for home delivery of Internet services, and virtually all of the RBOCs have some form of ISDN deployment plan. For those lucky enough to live in an area where it is available, and at a price that is affordable, it's a fascinating link.

## AN ISDN INSTALLATION IN ILLINOIS - NOTHING TO IT



by Chris Babb

**I** love speed. I drive as fast as I can, everywhere I can (well, without getting caught). I eat as fast as I can shov-

el it into my mouth (when there is no one else around). I walk fast where ever I go. I love speed.

I remember the days of 300 baud modems and thought, cool, this is fast. Then I remember 2400 baud modems and I thought, cool, this is even faster. I just about had to pick my jaw off of the floor when I got a 14.4 Kbps modem. This was faster than Ameritech said I could go on a POTS line. I felt like I was speeding and the telecops would catch me and give me a ticket. Then I got my 28.8 Kbps modem and thought it was all over.

I had been hearing about ISDN for some time. Gads, 56 Kbps access to somewhere; anywhere. After I started working with Aquila Internet, I really found out that while I was going fast at 26.4 Kbps that I can actually get with a 28.8 Kbps modem, it just wasn't fast enough to grab some of the cool stuff I was finding out on the net. After spending some time in September talking with Kevin Behrens (of Aquila BBS), we decided that it might be a good idea if we did a little testing with a high speed connection. Well, I wasn't going to argue with that thought. As I said, I love speed. The first thing that I needed to do though was to see what it would cost and even if it was available in my area. This is where the fun (agony?) began. First a little background on ISDN:

ISDN stands for Integrated Services Digital Network. It provides switched digital communications supporting data, voice and video applications. The data is circuit, packet switched, synchronous or asynchronous and can be transmitted at up to 64 Kbps. A Basic Rate Interface ISDN line is generally setup as 2B+D (2 bearer channels and one data channel). The bearer channels are each capable of handling up to 64 Kbps of data or voice. The D channel carries all set-up and signaling information. In order to utilize ISDN, you must provide a TA (Terminal Adapter) and a NTU-1 (Network Termination Unit) at each end of the connection at a current cost of up to **\$1000** per TA. Basically fast. Basically expensive when you factor the equipment along with the service. Enough of the basics.

I called Ameritech to see what the deal was. The first thing I found out was that I had to talk to Team Data. After speaking with the rep, I found out that I was ignorant about ISDN, and I wanted to stay ignorant. No sense leading myself on. You see, I spend about eight hours per day connected to Aquila. If I had the service installed, at the current calling rates and monthly

charges, my exuberant love of speed would cost me oh, somewhere around **\$800** per month. So I bailed on the whole idea. I love speed but I also love to eat. Defeat, snatched from the jaws of victory. At least for now.

Over the course of the next month or so, I heard that Ameritech was in the process of restructuring some of the tariffs. I called again and was told that why, yes indeed, the residential ISDN tariffs were in the process of being restructured and please call us back in 30 to 60 days to see what shakes out. So I waited. Not too patiently as you might expect considering how much I love speed, but I survived.

Around December 12th, I decided that I had waited long enough. I made my call to Team Data to see what had shaken out. When I finally got a rep on the phone, I asked him if the restructuring had been completed. He didn't know. So I took a shot and asked what the current rates for ISDN were. Amazingly enough, he was quoting me prices that would actually let me continue to eat. Remember, these are Aurora, Illinois rates. The rates were as follows:

|                |   |
|----------------|---|
| Installation   | <b>\$165</b>                                |
| Inside Wiring  | <b>\$45 + \$72/hr</b>                       |
| Monthly Charge | <b>\$42.15 Basic Rate Interface (2B+1D)</b> |

| Usage:  |            |            |
|---------|------------|------------|
| Band    | 1st Min    | Other mins |
| 0-8 mi  | 5.2 cents  | untimed    |
| 8-15mi  | 8 cents    | 2 cents    |
| 15-40mi | 10.5 cents | 3.5 cents  |

I must say that I was a little more than surprised. Since I was in the 0-8mile range from Aquila, a nickel per call with no time limit was a bargain. I could live with the other charges for now and the only kicker left was the cost of the TA and NTU-1. Since Aquila was going to provide me with this equipment, I wasn't very concerned. I again asked about the restructuring, just to be sure these were real numbers I was being quoted, and I was assured that they were. At this point, I decided to order the service and tried to get them to put it in, quickly (like yesterday). I had to wait. Grrrr. But was OK because I was going to get more speed and I do so love speed.

The next day, I called Team Data again, just to get some more details on the service. I was connected to a different rep, explained the previous day's conversation, and asked about the rate restructuring just to be sure. This time I was told that no, the restructuring was not yet in effect and that if I



ordered service now, it would be at business rates and I would have to pay an additional **\$34** to switch once residential rates went into effect. It was explained that the restructuring would be effective in seven to ten days. Well, until I could get some real information from someone at Team Data, I decided to put the installation on hold. Something I really didn't want to do.

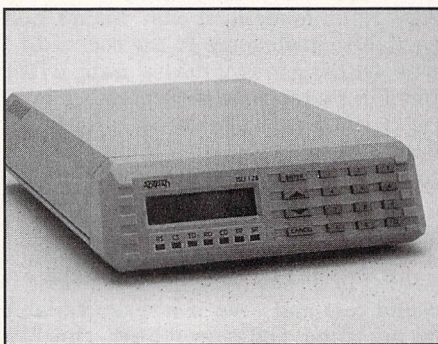
About a day later, I received a call from a communications company that worked with Ameritech on ISDN service. They explained that Ameritech always handed off to another company when ISDN service was being requested. This was to ensure that I got all of the details on service and equipment. I basically explained what had transpired and asked them to verify the rates and status of the residential tariffs before I would commit to anything else. Then I got to do something I am not very good at. Wait.

While all of this was going on, I was explaining to Behrens about how screwed up Ameritech seemed to be over residential ISDN. He laughed and told me the fun that Aquila had getting its ISDN lines in a couple of years before for the BBS. I didn't feel so bad after that. He also pointed me to Rich Vogt at Resource Communications in Downers Grove, Illinois. Behrens explained that Vogt was instrumental in getting ISDN for Aquila BBS up and running. So I got Voht involved, explained what had been going on and waited some more. Finally, I got calls from everyone at the same time. One of them said that the new tariffs would go into effect the next day. Another said that they had been in effect since the previous month. Another said that they had been in effect since the beginning of the month. I was so confused! Was this how the installation was going to go? I thought not. I found out that I just should have quit thinking. It would have been much easier.

I went with Resource Communications and ordered the service since at least all of the dates told me seemed to overlap and it did look as though the new tariffs were in effect. Finally! Then the questions. Had a Loop Qualify been done? Do you want a single B channel or 2B+D? Do you want packet switching on the D channel? What kind of TA will you be using? Get the drift? Are you confused? I sure was. I didn't know that I needed to know all of these details before having ISDN installed. Personally, I thought that all I had to do was exactly what I did when I ordered my last phone line. Say I wanted it and when. Thanks to Vogt and Joyce at Resource though, I had plenty

of help and explanation of what all of this was and how the service should be ordered. Now all I had to do was wait. I hate waiting. But then again, I was waiting for speed so that was OK.

The loop qualify is actually something Ameritech does to see if the lines can carry ISDN. I wanted the 2B+D. A single B channel isn't actually ISDN, it's a telephone company marketing ploy of no known use. I did not want packet switching on the D channel. This is X.25 at 16 Kbps which is slow. I like fast. Which is why I'm using the 2 bearer channels. I was using an Adtrans ISU 128 terminal adapter. This is like a modem but it neither modes nor dems - it just connects the ISDN. Still LOOKS like a modem. And it costs like a car. But we had to work all this out along the way.



**Adtrans ISU 128  
terminal adapter**

So here I sat. The day was about to arrive. I had to finagle my way out of work for a day to be around for the installer who was going to be there in the A.M. (yes, I am optimistic also). The day before, I called Joyce at Resource just to confirm that everything was still scheduled. Yes, everything was but, (I hate that word) Ameritech wasn't sure if I needed to have a repeater installed on the line to my house. It just so happened that my street was the dividing line between repeat and nopeat and they wouldn't know if one would be required until they did the installation. As far as I knew, a Loop Qualify was the test for that and I had been assured that a Loop Qualify had been completed and oh, by the way, if a repeater was required, that would be another **\$22** per month if you please. Not too happy but too far along to quit now. And that's OK because I could eat peanut-butter and mayonnaise sandwiches a couple times a month to cover it. As it turns out, if you are too far from the central office, you need a repeater. I wasn't, and I don't. Anything else Ameritech? Oh yes, there was plenty.

So installation day comes. No installer. I'm sure everyone has had this happen before. You take off of work or wait around all day for someone or something to show up at your house and they don't show up at all. I hate it when that happens. Not only is it inconvenient but can be expensive if you're not getting paid for the day and plainly frustrating. Joyce at Resource Communications told me that this might happen and if I didn't see anyone by 10 a.m. to give her a call. So I did. She got in touch with Ameritech and found out that construction crews were out working on finding an unloaded pair of wires in a manhole somewhere around my house. She also said that they still were not sure if they needed a repeater on my line yet but they should know around noon. So around 2 p.m., I still had not heard a peep out of anybody. I of course let Joyce know and she suggested that if both of us started calling, maybe we would get some results. Now that would be fun. I always enjoy calling a business during working hours and getting an answering machine which was exactly what I got. Well, between Joyce and myself, several phone calls, a couple of threats and a pile of excuses from Ameritech, an installer finally showed up. Well, that's OK that he showed up at 5 p.m. and oh yeah, the inside wiring will be installed but he can't hook it up anywhere because they weren't able to find a good pair of wires to use and oops, I almost forgot, they still need to come out to hang a new wire from the pole to the house. Excuse me?! What did they do all day?

Needless to say, I was pleasant to my installer, but not so very nice to Ameritech. I decided to give good old Team Data a call to see just what the hell was going on. I didn't take the day off and burn a **\$200** vacation day only to be held hostage by Ameritech all day, you know. So what do I hear when I call? First, my service is not installed. Second, they still can't find good wires. Third, they still don't know if they need a repeater. Fourth..., well, it's pretty obvious to me by then that they do not know what is going on, while all the time maintaining to me that they do. By this time, my installer is smiling and shaking his head after listening to me on the phone. I'm also shaking my head, but sure as hell, I'm not smiling. I'm thinking about the weekend without speed and wondering why anyone would want to put themselves through this. Then my phone rings again and this time I have the Team Data Provisioning Center Manager on the phone. Now he is very nice and explains pretty much what I had already heard with the exception that



my service may not be fully installed for another seven to ten days. I politely explained that I was extremely unhappy with the way the whole shebang is going and I wonder how I will explain all that I am going through to those people who will be attending our Internet Seminars where I will be talking about ISDN and all of its advantages. I don't think he was happy to hear that. I also mentioned that it would probably be a safe bet to determine a due date for service and maybe figure out where the wires are a day or two ahead of time. Either that or get the date and add a couple of days to it just to keep people from burning a whole day waiting for something that isn't going to happen. Basically what it came down to was that Ameritech was not prepared to start installing residential ISDN service and I just happened to be the first residential installation under the new tariffs. Oh I love being on the bleeding edge!

So, two days later, I get this call at work and wouldn't you know it, it's Ameritech telling me that my line is in and is working! Well, I could hardly stand working for the rest of the day in anticipation of going home to speed. I like speed. I sped home so I could hookup and see just how fast speed was. I hooked up my Adtran ISU 128 terminal adapter to my serial port and to the telephone line, entered the Service Profile Identifier (SPID) via the Adtran front panel, set it up for 57.6 Kbps async and saw ISDN Ready on the display. The SPID is actually a sequence of digits used to identify the ISDN terminal adapter to the ISDN switch at the telephone company central office. They give you this number, and it is basically your telephone number with a couple of extra digits. I dialed Aquila Internet. Nothing.

Now I knew that I had the same identical Adtran at the other end of the connection and between Steve Williams (of Aquila) and myself, we burnt the whole evening trying to connect to each other. Nothing. The next evening we tried again. Nothing again. Fortunately, I had been talking to Adtran Tech Support and was able to get their tech support to stick around and help us out. After about two hours, we finally determined that the ISDN service supplied to Aquila was only allowing a connection at 56 Kbps, not 64 Kbps as it should have been. Well, this was not going to work for us at 57.6 Kbps async so we again had to give up. As Jack would say, Booger. I said something unprintable.

As you can imagine, by this time I am pretty livid. I called Team Data and explained the problem. I didn't get a

response from them so I decided to give Vogt a call at Resource Communications and explain the problem to him and see if he could blow some air up Ameritech's skirt to get them rolling. This did the trick. The problem, as it was explained to me, was when Ameritech upgraded their service to the remote that Aquila got their service through, one of the software settings on a switch did not get updated correctly. They fixed it and Steve and I again sat down and tried to connect. Bingo, first try and I was zipping along the information superhighway at 57.6 Kbps from my desktop. Now this was more like fast than what I was used to as being fast. Then we decided to try a 115.2 Kbps bonded connect. This basically connects BOTH 64 Kbps bearer channels for a total of 128 Kbps link, but on an asynchronous serial connection this is actually 115.2 Kbps. To do it, you simply set the Adtran configuration to 115.2 Kbps. That is, the Adtran configuration on BOTH ends has to be set to 115.2 Kbps. And I was surprised that we didn't have to do anything else to accomplish this "bonding" of the two B channels. We made the connection on the first try. This was a little faster than plain fast. Too bad that it took one day longer than it took God to make the heavens and the earth to get it installed and running.

Not only was the connection fast at transferring huge ugly graphic images, but it is fast at making the connection itself. The 28.8 Kbps modems can spend 30 to 45 seconds dialing up the service, going through the handshake and talking to itself before you are on the net. With ISDN, this entire process reduces to no more than five seconds from the time you click a Windows icon until you are hooked up and going through the login process. Further, there are no hissing beeping squalling noises coming from the Adtrans. It blinks a couple of times and you're there.

I guess that the end result of all of this was that I now have real speed and power on my desktop. I also know when I am getting a load of bunk from Ameritech. Another interesting result was that I have since ordered another ISDN line that was installed where we hold our seminars. It was in and working on the day promised. Go figure. Was it worth it? Hey, it's fast and I do like speed.

Chris Babb  
[chris.babb@aquila.com](mailto:chris.babb@aquila.com)  
 Aquila Internet Tech Support

Aquila BBS  
 Aurora, IL  
 Voice (708)-820-0480

BBS (708)-820-8344  
 SLIP (708)-820-8440

Resource Communications  
 Downers Grove, IL  
 (708)-261-8378

Adtran, Inc.  
 901 Explorer Blvd.  
 Huntsville, AL 35806  
 (800)827-0807

## HERE COME THE KNOWBOTS

by Kevin M. Savetz

**K**nowbot - an independent, self-acting computer program that seeks for information on behalf of a user, possibly replicating itself on other hosts on the network. As the knowbot performs its task, it sends reports back to the user, and self-destructs when it completes its task.

Although it sounds like a character from a William Gibson novel, the concept of the "knowbot," an automated program which searches for information for you, is slowly becoming a reality on the Internet. Knowbots stand to change the face of research and information retrieval: rather than spending hours searching for an electronic needle in a virtual haystack, why not let the information come to you?

I first wrote about a kind of Knowbot for Boardwatch in an article about the Stanford Netnews Filtering Service. It's a program that periodically searches the entire Usenet for the information you request and e-mails any "hits" back to you. (For information about it, send mail to [netnews@db.stanford.edu](mailto:netnews@db.stanford.edu) with the word "help" in the message body.)

I'm happy to report that the concept and power of knowbots are expanding on the 'net. The actual implementation of today's knowbots are decidedly less sexy than the futuristic-sounding self-replicating, auto-destructing Knowbot defined above. And they still don't resemble the fancy animated "agents" that Apple Computer predicted in a futuristic promotional video a few years ago. Still, knowbots are very handy as automated news clipping services. Here we'll examine what you can do with two more Knowbot utilities - another one from Stanford and one by the folks at San Jose Mercury News.

## MERCURY CENTER NEWSHOUND

The Mercury Center NewsHound is an easy-to-use news clipping service that



offers the first low-cost news search agent aimed at consumers. NewsHound automatically searches the stories and classified ads in the San Jose Mercury News as well as hundreds of stories not published in the paper. Articles and ads matching your interests are sent directly to you via e-mail.

Here's how it works: once you sign up, you send a search request via e-mail to the NewsHound program. Every hour or so, NewsHound checks to see if any of its recent news and ads match your request. It automatically sends the ones that do to you via electronic mail. I use the service to send me articles about online services, my favorite musicians and ads for used computers. One might also use it to scope out editorials about Newt Gingrich, news about your home town or ads for used Pintos.

Each request that you submit includes lists of "required" terms, "possible" ones and "excluded" terms - phrases that you just don't want to hear about. The NewsHound uses a type of fuzzy logic to find the most relevant articles and advertisements. Essentially this involves counting the number of "possible" and "required" terms found in an article and then assigning the article a "selectivity" score. The score of an article ranges from 1 to 100. The higher the number, the more relevant the article.

NewsHound searches a variety of newsy databases in pursuit of your information needs, including the San Jose Mercury News, the Chicago Tribune, Detroit Free Press, Miami Herald, Philadelphia Inquirer, The New York Times News Service, The Associated Press, PR Newswire as well as published and unpublished articles from 60 other sources, for a total of about 2,000 articles each day.

NewsHound isn't free, but it's inexpensive enough to be affordable for just about everyone. The special rate for charter subscribers is **\$4.95** per month for up to five search profiles. That is a flat rate that applies regardless of the number of stories or ads delivered to your e-mailbox during the month. (The rate for non-charter subscribers will be **\$9.95** each month.)

To register to use NewsHound, call **1-(800)818-NEWS** or **(408)297-8495**. For more information, send electronic mail to **newshound-support@sjmercury.com**.

## COMPUTER SCIENCE TECHNICAL REPORT SERVICE

As part of the DARPA Electronic Library Project, the Database Group at Stanford provides a free service to disseminate information about computer science technical reports. If you're a computer scientist, listen up. And if you're not, listen anyway: this will still give you an idea of the power of knowbots.

A user interested in receiving bibliographical records of technical reports available from the Math/Computer Science Library at Stanford submits his "interest profile" to the service. Periodically you will receive new information relevant to his interests via electronic mail.

Queries are formed as plain English text (for example "high speed fiber optics communication") submitted via e-mail. Abstracts of technical reports are returned based on their relevancy to your query. As new and relevant reports are added to the database, the Knowbot will inform you. Some of them are available digitally - you can receive the full text with a simple e-mailed request. For others, you'll have to trek to your local library (or Stanford's) for the actual report. For more information about using the service, send e-mail with word "help" in message body to **ellb@db.stanford.edu**

## WHAT'S NEXT?

Admittedly, computer science technical reports are pretty dry and only of interest to a small group, but imagine what might be done with other databases running on Knowbot servers. How about a recipe database, updated weekly, that automagically e-mails you vegetarian recipes featuring red potatoes or asparagus (but not beets)? Or an archive of Boardwatch articles that sends you everything mentioning Macintosh, except for stuff by that pesky John Dvorak? Stay tuned. I predict those things (and more) are coming to the Internet, sooner or later.

Kevin M. Savetz  
**savetz@sequoia.northcoast.com**

Author, "Your Internet Consultant - the FAQs of Life Online,"  
Sams Publishing - ISBN 0-672-30520-8 FAQs/articles/ info:  
**<http://www.northcoast.com/savetz/savetz.html>** ♦

## Example of Newshound service

[To: **NewsHound@sjmercury.com**

Subject: request

create: music

search: articles

possible: laurie anderson,negativland,they might be giants

selectivity: 20

From: **NewsHound@sjmercury.com** (NewsHound)

To: **savetz@northcoast.com**

Subject: Your NewsHound request

You now have 3 NewsHound profiles. Their attributes are:

Title: INTERNET

Search: articles

Possible: internet,online service,online service,worldwideweb,mosaic,compuserve,america online,eworld,prodigy

Excluded: information superhighway

Selectivity: 30

Title: MUSIC

Search: articles

Possible: laurie anderson,negativland, they might be giants

Selectivity: 20

Title: SUN

Search: ads

Possible: sun,sparc,sparcstation,unix, macintosh,mac

Required: for sale

Selectivity: 50

From: **NewsHound@sjmercury.com** (NewsHound)

To: **savetz@northcoast.com**

Subject: [30] STUDENT-RUN RADIO STATION A FIRST  
ON THE INTERNET

Selected by your NewsHound profile entitled "INTERNET." The selectivity score was 30 out of 100.

Student-Run Radio Station a First on The Internet  
By JULIANNE BASINGER, Associated Press Writer

CHAPEL HILL, N.C. (AP) — The campus radio station at the University of North Carolina is serving up its musical fare to a wider audience these days: Listeners abroad can jam along — if they have the right computer.

WXYC-FM recently jumped onto the Internet, becoming the first radio station to offer 24-hour programming on the air and the global computer network simultaneously.

People who want to listen can do so by gaining access to the university's site on the World Wide Web, a part of the Internet that has become popular because of the development of sound, video and graphical features. ♦



# TECHNOLOGY UPDATES

by Jim Thompson Western News Service



## INTERNET CAR

Just when we thought the Data Highway was only electronic! DOE, NASA, and three dozen high technology companies led by XCORP, a Los Angeles-based R&D company, are building an entire car on the Internet.

First, the vehicle's aerodynamics will be fine tuned via the Internet using Langley-NASA's state-of-the-art Fluid Dynamics Computer Department. Crash simulations will be done the same way. Engineers in Los Angeles will use Langley's Virtual Cockpit Designer software via the Internet to design the SuperCar's cockpit.

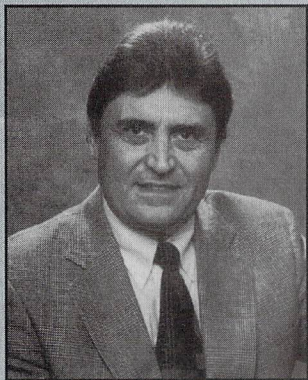
Next, production-ready parts specifications will be sent via the Internet which means they can be

produced in hours instead of months, then sent to the plant for assembly. The final prototype will then be tested via Internet. Its integrated chassis and aerodynamic sensors will send data back to Langley for further analysis. The car is expected to be completed in only 12 months.

This new prototyping system paves the way for a future where vehicles are designed in one part of the world, their parts fabricated all over the world, and the final car built in local clean manufacturing micro factories.

Gee, I wonder if we could run races this way?

CONTACT: XCORP, (310)859-9903

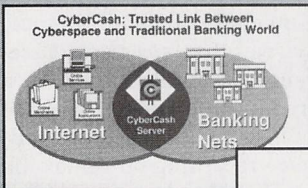


**Bill Melton, CEO  
CyberCash**

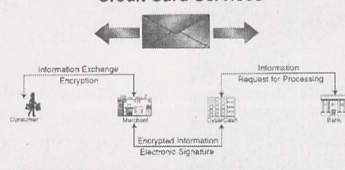
## CYBER-CASH & WELLS FARGO = E-MONEY

The Electronic Highway may soon be paved with plastic. CyberCash Inc. is working with Wells Fargo Bank to develop secure payment services for use on the Internet. A safe method of electronic payments will certainly result in a boom for online merchants who want to capitalize on the Internet revolution.

Contact: Susan Ice,  
Thomas Associates Inc.,  
(415)325-6236



### CyberCash Transaction Flow: Credit Card Services



## WINDOWS NT FOR THE MAC

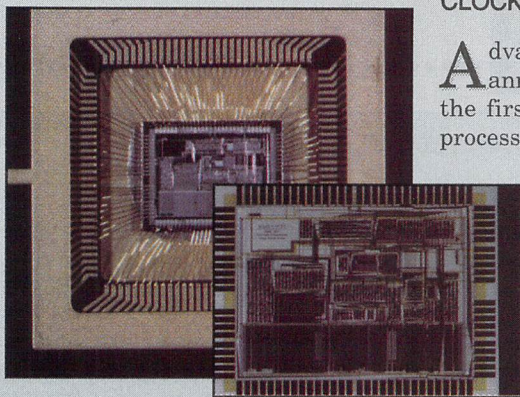
Is WINDOWS NT coming to a MACINTOSH near you? The first desktop system/server that incorporates dual high-end PowerPC microprocessors and runs the Microsoft(r) Windows NT(tm) operating system was demonstrated at COMDEX.

The design elements of FirePower's Powerized(tm) MX4100/2 SMP (symmetric multi-processing) system place it well along the path toward meeting the new hardware reference platform announced by Apple, IBM and Motorola. The MX4100/2 is the first system to combine multiple PowerPC 604 processors, IEEE 1275 Open Firmware, PCI bus, and the complete hardware reference platform I/O on the main logic board.

CONTACT: Phil Schiller, FirePower Systems Inc.,  
(415)462-3025







## CLOCKLESS PROCESSOR

Advanced RISC Machines Ltd. (ARM) and the University of Manchester have announced a collaborative research initiative leading to the development of the first "clockless" asynchronous microprocessor. The result could be faster processors requiring less power.

Under the agreement, ARM acquires the rights to research into computing without clocks from the team led by Professor Steve Furber of the University of Manchester. In March of 1994, Furber's team created Amulet1, the world's first fully asynchronous implementation of a commercial processor. This implementation was based on the ARM60 core.

CONTACT: Advanced RISC Machines Ltd. Tim O'Donnell,  
(408)399-8855

## HP AND MICROSOFT GOING WIRELESS

Hewlett-Packard Company and Microsoft(r) Corp. are working on an infrared communications system for linking PCs, printers and other peripheral devices. According to Hewlett-Packard, the software solution is being designed for PCs and peripherals with IrDA-compliant infrared ports that use Microsoft's Windows(tm) 95 operating system. This should make life a lot easier for laptop users who need to transfer files to their home or office machine.

Contact: Hewlett-Packard Company, (408)553-2916

## MINICARTRIDGES WITH BIG CAPACITY

Five leading companies in the quarter-inch cartridge industry have announced plans to develop compatible new drive and minicartridge products that will more than double existing minicartridge capacity, utilizing new 3.5-inch "TRAVAN" technology.

At the time of this writing, five companies have endorsed TRAVAN technology — 3M, Sony Recording Media, Hewlett-Packard's Colorado Memory Systems Division, Conner Peripherals and Iomega Corp.

The native (uncompressed) storage capacity of the new TRAVAN modified QIC-80 drive/cartridge is expected to be 400 MB (current minicartridge capacity is 125 MB). Native storage capacity of the new modified 3010 drive/cartridge is expected to be 800 MB (current minicartridge capacity is 340 MB). The capacity of the new modified 3020 drive/cartridge is expected to be 1.6 GB (current minicartridge capacity is 670 MB).

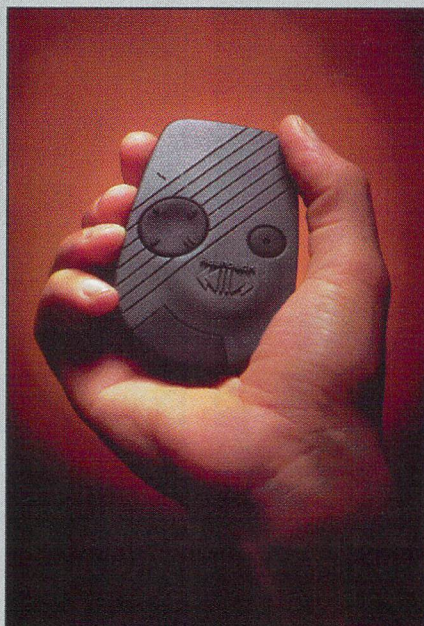
CONTACT: 3M Data Storage Products, (612)736-5961

## OCR FOR LONGHAND

Lexicus Corp., a Motorola Inc.-owned company, has introduced its Lexicus Longhand Handwriting Recognition Software for Developers. Lexicus Longhand is the first cursive handwriting recognition software designed for the Windows for Pen Computing operating system. According to the company, the program recognizes and corrects natural handwriting — cursive, print or a mixture of the two.

Maybe we finally found something that can read my doctor's handwriting!

CONTACT: Lexicus Corp.,  
(415)462-6817



## FLASH MEMORY VOICE RECORDER

... and if you can't write — Norris Communications Corp. has brought computer technology to the recording industry with its Flashback personal digital voice recorder.

The recorder, which utilizes solid state, non-mechanical flash memory technology, weighs less than three ounces, is smaller than half a deck of playing cards and allows for 30 or 60 minutes of high-quality, randomly accessed voice recording on removable PCMCIA (PC Card) compatible SoundClips.

But can you plug in a mouse?

CONTACT: Norris Communications,  
(619)679-1504



## LCD TV AND QUAD-DENSITY CD ROM FROM SANYO

Sanyo has rolled out two exciting products at the recent Consumer Electronics Show. The first is a 3-D LCD TV screen that doesn't require special glasses. The second is a quadruple density optical disc that makes laser-disc quality video possible on compact discs.

The LCD video (4, 6 and 10-inch) screens utilize new image-splitter technology to achieve the 3-D effect. This image splitter technology is the first of its kind that can be economically applied to small size liquid crystal displays.

The new quad-density CD ROM has data signal pits and a recorded track pitch that are half the standard size. This means that four times the amount of data can be stored. According to the company, "With Sanyo's new semiconductor laser, super resolution technology is used to focus a beam on a signal as small as 0.42-micron pits, doubling the accuracy of conventional pickups."

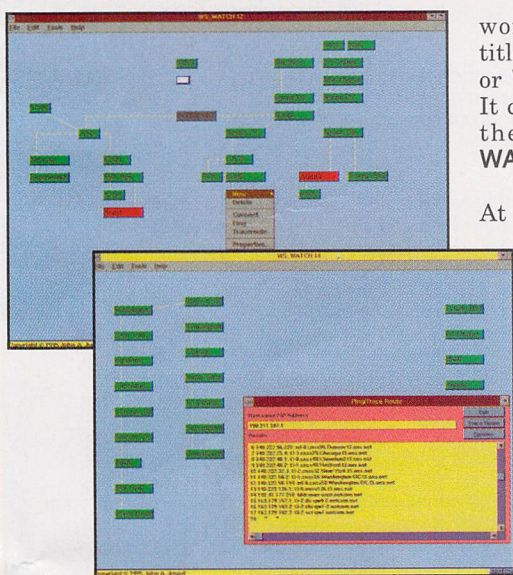
Contact: Sanyo, (818)998-7322

## FISHER 24-DISC CD ROM CHANGER

Fisher Audio/Video has applied its Studio 24 technology to computers with the intructions of the first prototype 24-disc CD ROM changer. The new quad-speed (4X) changer connects via a SCSI-2 interface and also reads Photo-CDs and audio CDs

Contact: Fisher, (810)998-7322

*(Jim Thompson is Managing Editor of Western News Service in Los Angeles, California. He also manages the Marlboro Racing News BBS. CompuServe: 72777,2677, MCI Mail: 321-4127, INTERNET: jim.thompson@wnsnews.com)*



work tools we've found online. It is titled the Windows Sockets Net Watch or **WS\_WATCH** for short and it's free. It can be found by ftp at <ftp.usma.edu> in the `/pub/msdos` directory as **WS\_WATCH.ZIP**

At heart, **WS\_WATCH** is a little block diagram program that allows you to setup a visual presentation of a network with little boxes for each IP address or domain name. You can arrange them however you like on the screen and connect them with little lines showing how they are connected to each other. Nodes are specified by IP number or by domain name. As such, it looks like a little mini-CAD program for diagramming the Internet.

## WS WATCH - TCP/IP NETWORK MONITOR FOR WINDOWS

Part of the wonder of the Internet is its distributed nature - you can't call it or go see it or otherwise really locate it anywhere. So in learning about it, we constantly fight to develop a mental picture of what it is and where it's at. These mental and visual paradigms of the "network" are often just analogies, and too often poor ones at that.

Master Sergeant John A. Junod is one of the head non-coms at the U.S. Army Computer Science School at Fort Gordon Georgia. He was also heavily involved in virtually all of the network installation and configuration at the West Point Military Academy. He's written a number of WINSOCK utilities such as **WS\_FTP** and **WS\_PING**. And more recently he's developed one of the most cunning little visual net-

The program then PING's all the nodes on your diagram every minute (actually you can configure how often it will perform this chore) and update your display so that the green boxes indicate up nodes and the red boxes indicate nodes that can't currently be reached. PING is a standard Internet function to send out a query and receive a reply from any host.

In this way, you can build a visual diagram of your own internal network, or of a national or global network of Internet addresses, and it will show you at any time which nodes are up and which are down. Very handy.

But it does go beyond that. You can click on any box to find out some specific information about it, and also access a little drop down menu that allows you to do several useful things. You can connect to the selected service, for example, by specifying a telnet and ftp program for **WS\_WATCH** to call when you click on the **CONNECT** option. In

this way, your diagram acts like a kind of visual menu. We found **TRACEROUTE** fascinating. It will pop up a box with a little log file listing every router or service between you and the destination. It can be fascinating to map out the route to another site you regularly connect to, and this gives you a very different feel for the network and its size. And Junod's traceroute function seemed to work faster than most we've used.

We used the traceroute function to help us map the journey our data takes through Internet land to arrive at various destinations. And we used **WSWATCH** to then graphically map this onto the screen. We could then observe the network and see who was up and who was down at any given minute. An Internet Provider could, for example, map all SLIP/PPP accounts to a screen that would show who was connected and who not at any one time - a kind of console for Internet services. We also made a diagram listing eight or ten bulletin boards we knew were connected, and could observe who was up and who was down at any given time. The program allows you to load and save different diagrams as **NAME.DB**. In this way, you can have an entire series of different diagrams available.

The program is very easy to install and works on Windows 3.1 with the Win32s kernel, Windows 95, Windows for Workgroups, and Windows NT 3.5. It requires an existing WINSOCK connection to the Internet. John A. Junod, 267 Hillwood Street, Martinez, GA 30907; (706)860-5308; [junodj@css583.gordon.army.mil](mailto:junodj@css583.gordon.army.mil) ♦



## LONG DISTANCE WARS

by Brian Gallagher and Larry Rauh

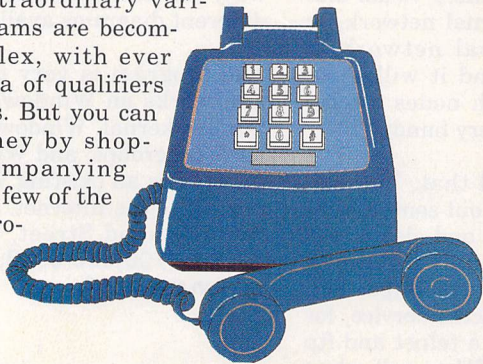
One of the key components of the cost of online communications remains the basic long distance telephone rates we pay to dial city to city. Since the divestiture of American Telephone and Telegraph in 1984, long distance service has become a very competitive business. AT&T, MCI, and Sprint were among the largest television advertisers in 1994 and along with hundreds of smaller firms have joined in a virtual war for your long distance dollar.

We recently had an incident where AT&T offered what looked like a very attractive program. We were presented, and signed, what we were clearly told was an order to change our service from our existing provider to AT&T. After we received our first astronomical bill for long distance, we immediately changed providers. We then learned we had purportedly signed a 36 month iron-clad contract and subsequently a bill for over **\$15,000** for services we had never, nor would ever receive. After a protracted battle, we fought that down to the point where they actually owed US some \$600 in overcharges, but it involved months of confusion on the part of both parties. Examine very carefully ANY documents presented for signing, no matter how lengthy and full of fine print. The "standard" agreements are gone and many of the long distance companies are trying any strategy they can find to battle "churn" - the tendency of customers to sign on to the program for a few months but later move on to another carrier to take advantage of the next offer. And some of these ploys border on fraud.

The landscape is crawling with sales representatives. On our last change in long distance service, I couldn't help but wonder how good our "deal" was when the company sent three guys in suits to spend the entire day with us in our office - all for a couple thousand dollars per month in long distance charges.

The other new element is the "we'll beat any deal" strategy. I'm not certain HOW to view this one. A long distance carrier will present you with the price of their program, but we routinely hear from them that if we get a better offer somewhere else, they will beat it. Does this really mean that we're not getting their best deal now, and if we know the magic words we CAN get it? Or what?

The bottom line is that for many small businesses or individuals who dial long distance much (our entire readership), it pays to shop around a bit. Daytime dialing rates vary from slightly under 14 cents per minute to as high as 29 cents per minute - an extraordinary variance. The programs are becoming more complex, with ever more in the area of qualifiers and disqualifiers. But you can save some money by shopping. The accompanying table lists just a few of the long distance programs currently in vogue. ♦



## The Numbers on Long Distance Carriers

### MCI

#### Preferred Account

Billing in full minute rounding  
25-29 cents/minute 8 a.m.-5 p.m.  
16-20 cents/minute all other times  
Mileage sensitive calling

#### Volume discounts

Between \$25-199.99, 3 percent  
Between \$200-1499.99, 10 percent  
Between \$1500-2999.99, 15 percent  
Over \$3,000 Vision service provided

#### Additional features

The customer gets 10 percent additional savings every month on area code that they use the most  
Sign up for a one year deal 5 percent additional savings  
Sign up for a two year deal 7 percent additional savings

For more information about service: 1-800-727-5555

### LDOS Communications (Long Distance Discount Service)

#### Easy Answer

13.8 cents/minute 8 a.m.-5 p.m.  
11 cents/minute 5 p.m.-8 a.m.  
Six second billing

#### Volume discounts

Over \$1,000 1/2 cent discount per minute  
Over \$5,000 1/2 cent discount per minute

For more information about service: 1-800-844-1009

### AT&T

#### Basic service

27 cents/minute 8 a.m.-5 p.m., 17 cents/minute 5-11 p.m. and 14 cents/minute weekends and after 11 p.m. weeknights.

#### True USA Savings

Discount 10 percent for \$10 more usage  
Discount 20 percent for \$25 more usage  
Discount 30 percent for \$75 more usage

#### Evening Plus

\$8.25 monthly service charge for 60 minutes of long distance from 5 p.m. to 8 a.m.  
After 60 minutes, 10 cents/minute  
Additional 5 percent savings on intrastate calls

#### Anyhour

\$10.75 monthly service charge for 60 minutes towards most expensive calls

After 60 minutes, 20 cents/minutes peak 11 cents/minute all other times

Additional 5 percent savings on intrastate calls

#### Simple Savings

To get this plan caller must use \$30 of long distance or plan will be void and caller pays regular rate.  
25 percent discount on all calls in a chosen area code  
15 percent discount to all other area codes

For more information about service: 1-800-222-0300

### Sprint

#### Sprint Sense

If bill is not \$25 in a month, \$3 monthly fee effective April 1, 1995  
10 cents/minute Monday-Friday 7 p.m.-7 a.m. and weekends until 7 a.m. Monday  
22 cents/minute 7 a.m.-7 p.m.  
Intrastate calling rates vary from state to state  
100 minutes free long distance divided equally between the first two months of service

#### The Most II

26 cents/minute 8 a.m.-5 p.m.  
16 cents/minute 5-11 p.m.  
14 cents/minute 11 p.m.-8 a.m.  
Between \$30-74.99, 20 percent discount  
Between \$75-149.99, 30 percent discount  
Above \$150, 35 percent discount

For more information about service: 1-800-877-4646

### Telephone Express

#### Flat Rate Express

17 cents/minute 8 a.m.-5 p.m. Monday-Friday  
15 cents/minute all other times  
Between \$501-1,000, 10 percent discount on entire bill  
Over \$1001, 15 percent discount on entire bill

#### Express Wats Plus

Package is Mileage sensitive and is good for interstate calls only



16.9 cents/minute 8 a.m.-5 p.m. Monday-Friday  
13 cents/minute 5-10 p.m. weekdays  
12 cents/minute 10 p.m.-8 a.m. and weekends  
Express city link to 12 major cities 15 cents/minute 8 a.m.-5 p.m.  
For more information about service: 1-800-748-2500

#### **SMART-TEL**

##### *Basic service*

13 cents/minute 8 a.m.- 5 p.m. Monday- Friday  
11 cents/minute all other times  
Six second billing  
Customer service provided by carrier, using eleven different long distance carriers  
Bill summary features  
For more information about service: 1-800-808-9287

#### **FROGnet BBS**

##### *Long distance service*

25 cents/minute 8 a.m.-5 p.m. Monday-Friday  
15 cents/minute 5 p.m. - 8 a.m. all other times  
\$ 6 annual fee  
Bill summary features  
For more information about service: 1-502-568-2711 or 1-800-475-7111 BBS

#### **Time Online Connection**

##### *All-day Any-day*

13.9 cents/minute anytime  
If you agree to a 24 month contract, 13.5 cents/minute anytime  
Six second billing

##### *After Hours*

24.9 cents/minute 8 a.m. -5 p.m. Monday-Friday  
10.9 cents/minute Saturday, Sunday-Friday 11 p.m.-8 a.m.  
12.9 cents/minute Sunday-Friday 5-11 p.m.  
Full minute rounding  
Bill summary features for both packages  
Guaranteed prices throughout 1995 for both packages  
For more information about service: 1-303-727-4314 or 1-303-473-9796

#### **Midwest Telecom**

##### *Basic Service*

17 cents/minute 8 a.m.-5 p.m.  
15 cents/minute all other times  
Six second billing  
Volume discounts  
Between \$500-1,499.99, 8 percent  
Between \$1,500-2,499.99, 12 percent  
Above \$2,500, 20 percent  
For more information about service: 1-800-900-9449

#### **Access Long Distance**

##### *Super Saver*

14 cents/minute 8 a.m.-5 p.m. Monday-Friday  
11.2 cents/minute all other times  
After 60 minutes of usage in one month, rate drops to  
9.8 cents/minute anytime  
Full minute rounding  
For more information about service: 1-800-574-5400

#### **American Tel-Advantage** (authorized sales agent for G.E. Exchange)

##### *Basic service*

15.9 cents/minute 8 a.m.-5 p.m.  
13.5 cents/minute all other times  
Six second billing  
\$100 minimum usage  
For more information about service: 1-800-442-3935

#### **Consolidated Telecommunications**

##### *Basic service*

14.5 cents/minute 8 a.m.-5 p.m. Monday-Friday  
12.9 cents/minute all other times  
Six second billing  
For more information about service: 1-800-425-9000

#### **Telecom**

##### *Basic service*

14 cents/minute anytime interstate  
Six second billing  
16 cents/minute anytime intrastate  
For more information about service: 1-800-456-6777

#### **CSI**

##### *Business One*

15.5 cents/minute anytime  
Over \$1,500, 13.9 cents/minute anytime  
Six second billing

Excludes Hawaii, Puerto Rico, Alaska and the Virgin Islands  
For more information about service: 1-800-864-4306

#### **Telecall Long Distance**

##### *Basic service*

14 cents/minute 8 a.m.-5 p.m.  
12 cents/minute all other times  
Six second billing  
For more information about service: 1-800-873-8355

#### **SP Telecom**

##### *Basic service*

15.5 cents/minute 8 a.m.-5 p.m. Monday-Friday  
14 cents/minute all other times  
Volume driven 2.5 percent additional discounts at \$200, \$1,000 and \$2,500  
For more information about service: 1-800-880-2406

#### **SpectraCOM**

##### *BBS Plan R*

Under \$50 per month  
13.9 cents/minute 8 a.m.-5 p.m. Monday- Friday  
11.9 cents/minute, all other times  
\$3.00 monthly service charge  
Full minute rounding

##### *BBS Plan B*

13.5 cents/minute 8 a.m.-5 p.m. Monday-Friday  
11.4 cents/minute all other times  
Six second billing  
For more information about service: 1-800-677-5622

#### **Allnet Communications Service**

##### *Edge*

21-26 cents/minute 8 a.m.-5 p.m. Monday -Friday  
16-20 cents/minute all other times  
After 30 second minimum, six second billing  
Mileage sensitive  
Alaska, Hawaii, Puerto Rico and the Virgin Islands  
26 cents/minute anytime  
Additional 10 percent discount on area code most frequently called  
Between \$25-199.99, 3 percent discount  
Between \$200-1999.99, 10 percent discount  
Between \$2,000-4,999.99, 15 percent discount  
Above \$5,000, 20 percent discount  
For more information about service: 1-800-783-2020

#### **CTG (Capital Trade Group)**

##### *Basic service*

14 cents/minute intrastate calls anytime  
16 cents/minute interstate calls anytime  
Bill summary features  
\$ 5 monthly service charge  
For more information about service: 1-800-284-7453

#### **NTC (National Telephone and Communications)**

##### *Dial One Business*

19-22 cents/minute 8 a.m.-5 p.m. Monday-Friday  
16-18 cents/minute all other times  
Six second billing on all packages  
Mileage sensitive on all packages

##### *Additional Savings*

##### *Prompt Pay Discount* (Customer must have bill in before due date.)

\$25-74.99 12 percent discount  
\$150-499.99 20 percent discount  
\$750-999.99 24 percent discount  
For more information about service: 1-800-569-4682

#### **Tele Trend Communications**

##### *Basic Service*

15 cents/minute 8 a.m.-5 p.m. Monday-Friday  
14 cents/minute all other times  
8-25 cents/minute intrastate calls anytime, varying greatly from state to state  
Six second billing  
\$5 monthly service fee can be waived under volume circumstances

##### *Top Twenty*

14 cents/minute 8 a.m.-5 p.m. Monday-Friday  
11 cents/minute all other times  
Six second billing  
10 percent discount on 20 Top cities, not based exclusively on population  
If bill is under \$150, \$15 service charge  
For more information about service: 1-800-873-6354



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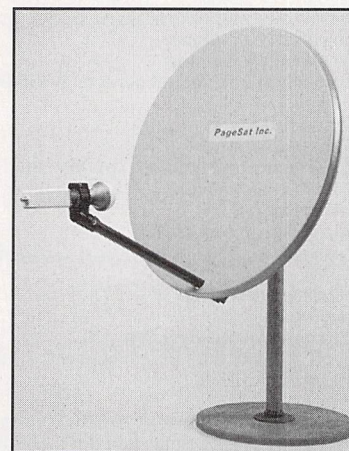
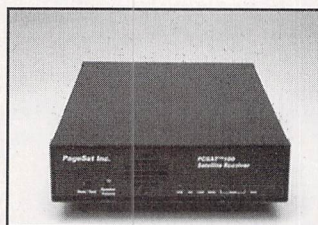
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For more information:

Info@pagesat.net

<http://www.pagesat.net>

CALL: 800-227-6288 FAX: 415-424-0405



In Canada: contact:  
Westonia, David Smith  
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**GO  
NATIONWIDE  
WITHOUT GOING  
BROKE**



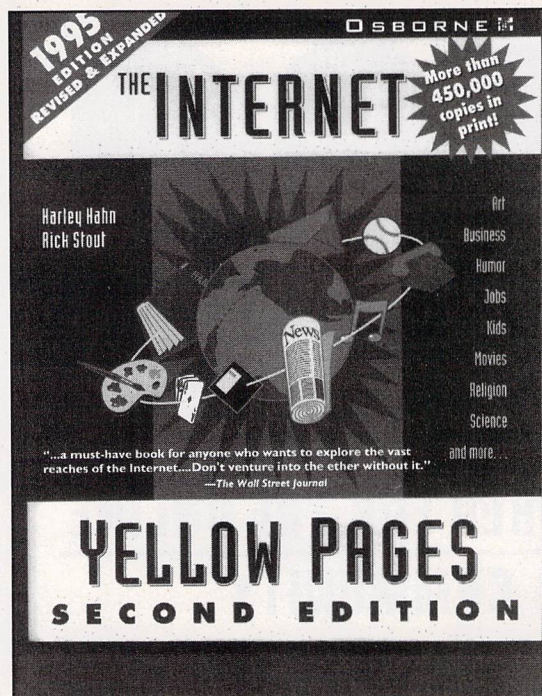
## INTERNET YELLOW PAGES

by Brian Gallagher

The 1995 edition of Harley Hahn and Rick Stout's Internet Yellow Pages is just hitting major bookstores across the country and it is sure to be a hot item. With nearly a half million copies in print it is sure to once again prove to be the definitive resource for online travelers.

This year, like cyberspace, the book has grown tremendously. Weighing over a half pound (9.05 ounces) the book looks more like the regular Yellow Pages than ever before. And like its namesake, the Internet Yellow Pages is sure to be the one that gets used. The 812 page reference offers a Table of Contents and an Index as well as a complete listing of all usenet newsgroups - giving readers fast and easy access to the wide range of information available online. Keeping abreast of industry trends the new edition doesn't miss a beat with nearly a third of all references cited being World Wide Web sites.

More than just a resources, Harley's light and humorous writing style makes the publication entertaining as well. For instance, on page 320 readers can find the web address for "Fabio's Top Ten Pick-Up Lines," with the following introduction: "You probably think Fabio gets all those women because he has bulging muscles, a washboard stomach, strong jaw, and long, lustrous hair. It's not true. He gets the women because he has clever pick-up lines." The address is <http://orange-room.cc.edu/toybox/WrittenWord/FabiosPickUpLines.html>.



From agriculture to zoology, if the online world is indeed an information superhighway, this is the road map.

The Internet Yellow Pages; \$29.95, Harley Hahn and Rick Stout; Osborne McGraw-Hill ISBN 0-07-882098-7 (800) 227-0900. ♦

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**Examples available for download on the TOC BBS.**



# GADGETS & GIZMOLOGY

by Gary W Funk  
Gizmologist

## SC&T PLATINUM SOUND EQUALIZER AMPLIFIER PRO

I recently ordered some new computers for the office and decided to replace the old 486/40 with something more powerful and with a few more options. I wanted a good multi-media system with great sound. So I ordered the best and fastest components and received a computer I was very happy with. Well, happy except for the sound. Although the computer has a great sound card and the speakers were of a fair size, the output was just not what it should be.

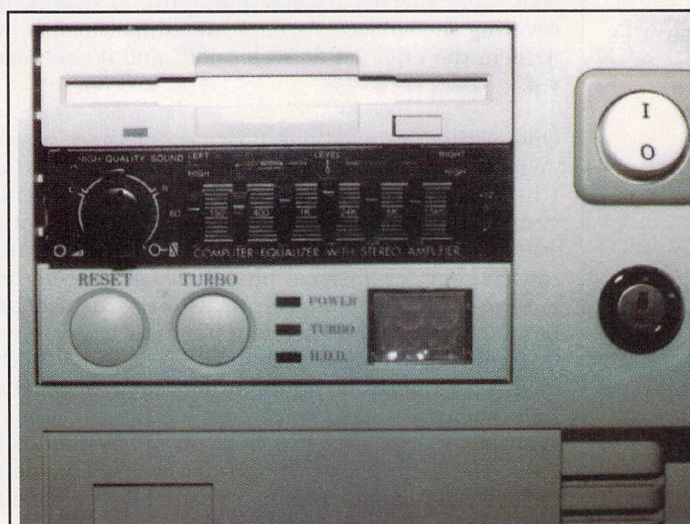
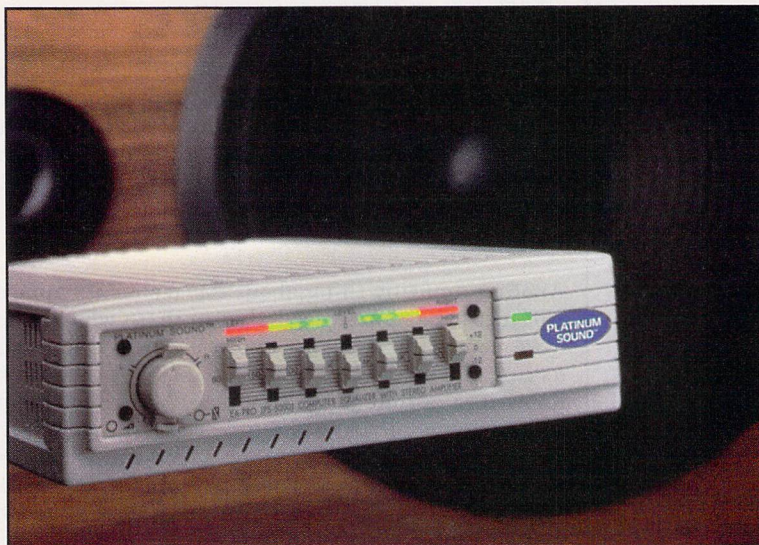
Most sound cards output only about four watts-per-channel of audio, and while amplified speakers help, you still don't get the sound power that's available. The solution comes in a form I first remember from the late '60s, which is the multi-band equalizer and amplifier. SC&T International of Phoenix has produced a peripheral that lets PC users do for their computer what audio buffs have done for their cars and homes. After all, we all like lots of power on our home stereos, and I have seen some car stereos with more speakers than Mile-High Stadium. So why should we be deprived of this great sound on our PCs?

The EA-PRO incorporates a seven-band graphic equalizer with Dynamic Filtering and a 60-watt (30-watt per channel) high quality amplifier, designed with noise reduction and low distortion. It has a stereo analog amplifier which accepts any type of audio input from a computer device, a stereo receiver, such as a portable CD or FM radio, or any device equipped with 3.5mm stereo minijacks.

The EA-PRO comes in two models, internal and external. The internal model installs in a standard 3.5 inch PC floppy drive bay or 5.25 inch drive bay with the use of an adapter. Power to the EA-PRO is provided by the computer's power supply. The audio input and output connections are made via cables which connect from the CD-ROM and sound card to the EA-PRO, and from a special backplate to the EA-PRO. Installation is not any harder than installing a 3.5 inch floppy drive.

The external model, which is the same as the internal unit except that it is mounted in a metal case about the size of a modem, is as easy to install as an external modem. The speakers plug into the EA-PRO and a cable runs from the speaker output of the sound card to the input of the EA-PRO. The unit is powered by standard AC power.

The front panel has controls for the volume and balance, and seven slide controls for the graphic equalizer. It also has two sets of LEDs making up volume level indication. Armed with these controls and an



amplifier designed with 0.07% noise reduction and 0.3% low distortion a PC can now produce sound that could only be heard on the finest stereos.

The suggested retail price for the Platinum Sound EA-PRO Internal (model PS-5000) is **\$199.95**, and the EA-PRO External (model PS-6000) is also **\$199.95**. This is one product I highly recommend for every multi-media computer.

SC&T International, Inc., 3837 East Lasalle Street, Phoenix, Arizona 85040 (800)408-4084 or (602) 470-1334 voice; (602)470-1570 Fax. ♦



## BABB'S BOOKMARKS

by Chris Babb

The Web has literally EXPLODED with sites over the last couple of months. I don't think that a single day has gone by for me without finding something new, interesting or just downright strange. I am constantly amazed at the wide variety of information that is available at the press of a button!

Another amazing thing about the Web is its appeal. Not just to computer users, but to those who are not even computer literate. There is always someone asking me something about it. My boss wants to know if it is commercially viable. My friends want to know what it is, and what "cool" things I have found on it. Even my Mother asked me what this "Web" thing is about. There are blurbs about the Web on TV, in newspapers, in magazines (and not just computer mags) and in the trade journals. The book store shelves are starting to fill up with books covering the subject. As Jack stated last month, we ARE in the midst of a "Weblosion" and it's not over yet.

One of the big questions floating out there now is "Where is this going to go?" That is a good question. I have seen virtual shopping malls, opinion polls, games, art galleries, museums, current hot tub stats, magazines (or 'e-zines'), a coffee pot, traffic reports, surf conditions, press releases, a congressional campaign page and a plethora of other unique and strange sites to date. (Yes, my name is Chris and I too am a Webuloid!) Will BBSs be the next big thing to be spinning out their web? How soon before we have to pay to be able to access a Web page? Just let me click on my Windows 8-ball... (remember those?) here it comes. "Unable to resolve host name." Damn, I guess I'll just have to wait and see with the rest of you.

Some real discussion is going on as to just how popular and populated this tangled web is. **"10,000 new homepages added this month," "This page has been hit 1 gizillion times since xx/xx/xx," "20,000 pages are indexed here."** Some of this may be real. Some of it may not. But there is one thing that shows through all the facts and figures. The Web is alive and growing and is going to be with us for a while to come. Hell, with homepages like BOB (who is Bob?) to the #\$\$%^ page to Joe Blows Intergerlictic Cyberslurper - this is MY homepage - homepage, I think we will be seeing a wealth of information, imagination, creativity and fun in the very near future. I can't wait to see what happens next.

Now, to the MEAT of this article. What really IS out there. There are many ways to find homepages. I could spend most of my time just hopping from

page to page (and I do) looking for interesting and "cool" sites. Some of the neatest things I find are by just doing that. But they don't do me any good just laying around on my hard drive. The most satisfying thing about the Internet (to ME anyway) is sharing the information around. That is what I am going to do. How will I do that? Well, for now, I will be listing some of the "cool pix" that I have found during my "Webulism" episodes. I think I'll call them Babb's Bookmarks. Here they are:

### BABB'S BOOKMARKS - 95

#### Web Browser - NetScape 0.94 Beta

I know a couple of other people who really have an affinity for this gem. Without a doubt, this has become one of the most popular of the many Web browsers out there. Here are some of its finer features:

- Displays both .gif & .jpg graphics as they are being received.
- Allows you to scroll down the page as the document is being loaded.
- Allows you to click on a link to another page before the current page is complete.
- Handles WWW, gopher, ftp and Usenet mail.
- Shows any links to other WWW pages in mail articles and allows you to just click on them to load them.
- Bookmarks not only allow you to keep a list of your favorite sites, but also make a customized homepage automagically for you.

#### USENET Newsgroups

For the latest news and information on WWW along with announcements of new homepages and software, check these newsgroups out:

- [comp.infosystems.www.misc](http://comp.infosystems.www.misc)
- [comp.infosystems.www.providers](http://comp.infosystems.www.providers)
- [comp.infosystems.www.users](http://comp.infosystems.www.users)
- [alt.winsock](http://alt.winsock)

#### WWW Homepages

Some of these are fun, some are informative, some are useless (but entertaining!).

**Name:** Welcome to Microsoft's World Wide Web Server!

**URL:** <http://www.microsoft.com/>

#### Description:

Microsoft's very own Web page. This page is available in both graphical and text format. This site provides public information about Microsoft and its products. Contained within is a clickable map of the Microsoft world with links to information on sales, Knowledge Base, What's New, Windows News (including Windows95), the Windows Socket Standard, Windows NT Server, Microsoft Employment Opportunities, Microsoft TechNet,

• BABB'S BOOKMARKS

• NATIONAL RENEWABLE ENERGY LABORATORY ON THE WEB

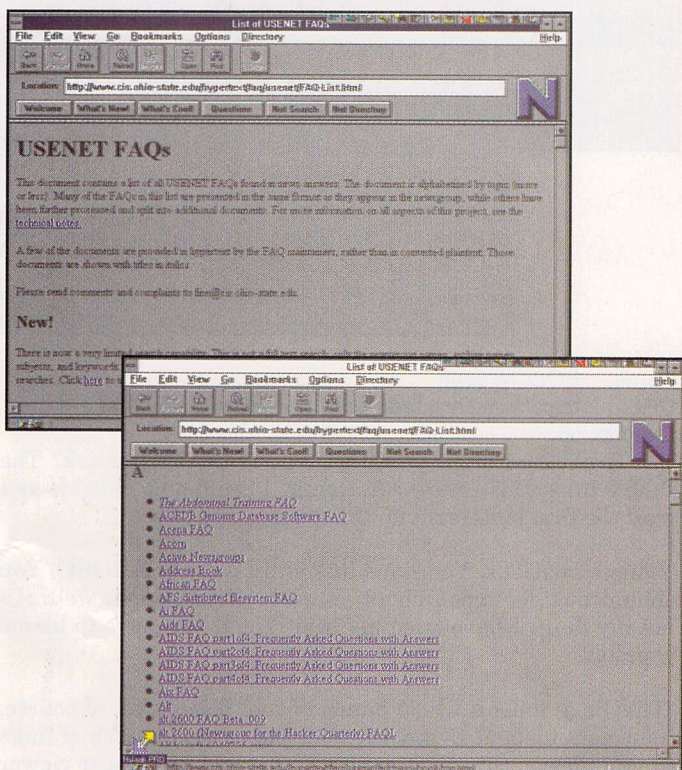
• PUBLISHING ON THE WEB, PART 2

• WEB SITES





Microsoft TV and the Developers Network. Links are also provided for Microsoft's gopher and ftp sites. This is an excellent site to visit to keep abreast of the latest developments from one of the world leaders in software.



**Name:** USENET FAQs  
**URL:** <http://www.cis.ohio-state.edu/hypertext/faq/usenet/FAQ-List.html>

**Description:**

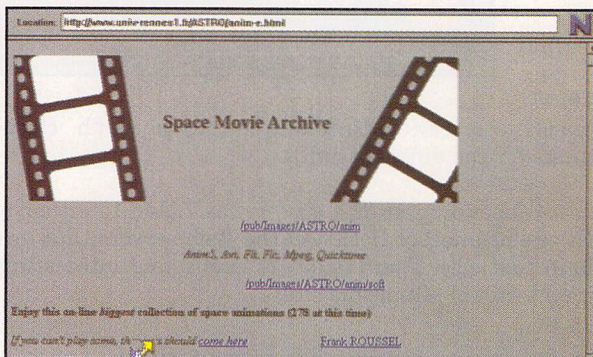
This site allows access to FAQs for virtually every Usenet newsgroup. They are alphabetized and are searchable. As every "newbie" has seen or been told, "read the FAQs before asking the same old questions." This is where to find them. They are also available at various FTP sites, but this is much more fun. It looks like they have their search engine up and running. There is also a list that is categorized by newsgroup.

**Name:** SPACE MOVIE ARCHIVE  
**URL:** <http://www.univ-rennes1.fr/ASTRO/anim-e.html>

**Description:**

Ever since I can remember, I have loved space stuff and rockets. I still remember my father waking me up one night

back in 1969, handing me a glass of pop (which was special in itself because we didn't get to drink pop normally, I knew something was up) and sitting me down in front of the tube. "Watch this", he said, "this is history being made right in front of our eyes". Then I watched Neil Armstrong make the first step on the moon. I was hooked then. I'm still hooked to this day. One of the neatest parts of getting access to the Internet was the ability to access NASA and all of the excellent information, pictures and movies available. I stumbled on this site, quite by accident one night and got pretty excited. This site boasts some 277 space movies in Anim5, AVI, FLI, FLC, Mpeg and Quicktime formats. If you don't have the viewers available to you, there is a link to <ftp://ftp.univ-rennes1.fr/pub/Images/ASTRO/anim/soft> where you can download the latest viewers for these formats.

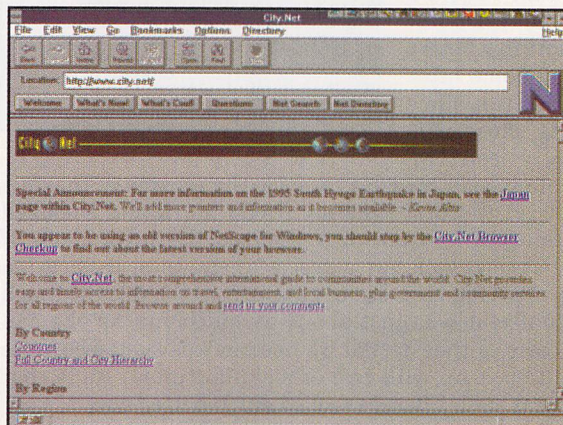


Some of the movies you can download include, but are certainly not limited to, Solar Eclipses, Meteorology, Science-Fiction, General space including many of the different probes sent up over the years, the Apollo missions and a whole pile of other extremely interesting events. Space buffs should not miss this one.

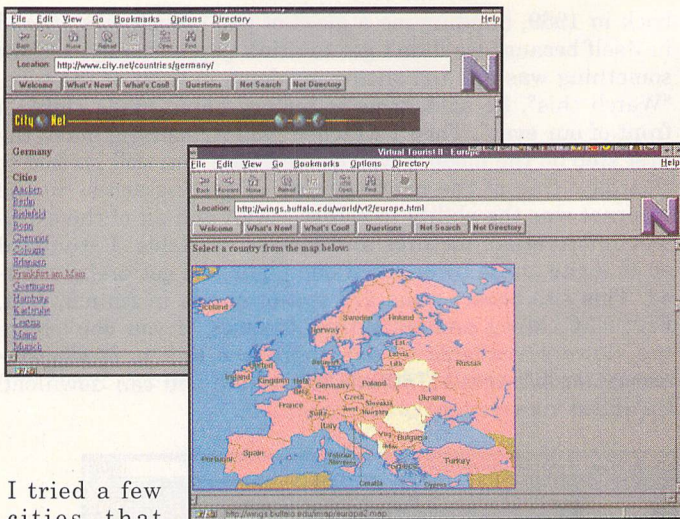
**Name:** City.net  
**URL:** <http://www.city.net/>  
**Description:**

I've been hearing a lot about cities who are putting information up on Web pages. Whether it's done to provide community information or to promote tourism or business opportunities, I really think this is an excellent idea. I heard a story about one city that was trying to lure businesses by putting a Web page up. They had a better response than they ever imagined. Take a moment and think of the possibilities.

This page is a link to City.Net guides from all over the world. Cities are locatable by continent/region or country. There is also a search feature available. City.Net software (WebMap for the Macintosh only) is also available.

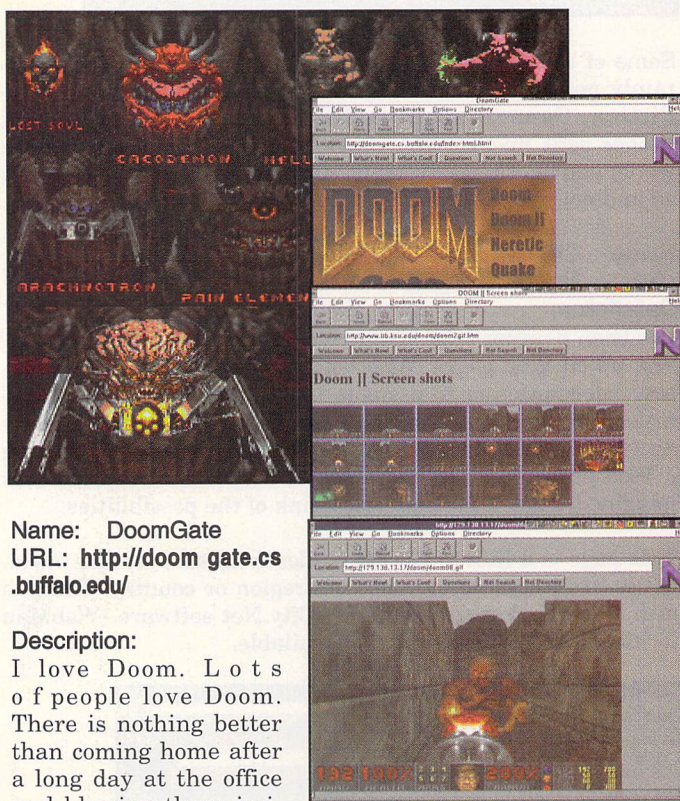






I tried a few cities that were available. First I was taken to a detailed map with clickable hotlinks for the different cities.

From there, depending on the city, I was taken to either a GOPHER site or another hotlist of the Web servers that are available in that city. There is lots of useful and interesting information available from this site.

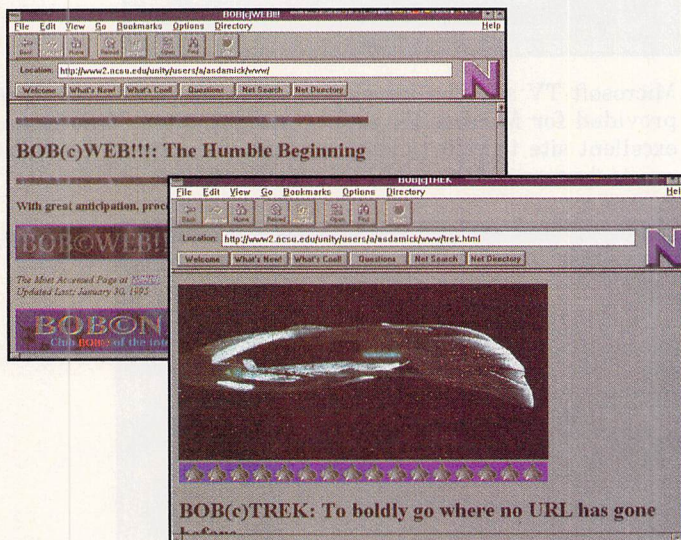


**Name:** DoomGate  
**URL:** <http://doomgate.cs.buffalo.edu/>

#### Description:

I love Doom. Lots of people love Doom. There is nothing better than coming home after a long day at the office and blowing those irritating, ugly roaring monsters into bloody little bits to ease the tension of the day. I'll never forget the first time my friend Mark and I hooked up over a modem and not only scoured the level clean of monsters, but also took out massive amounts of frustration by blowing the living crap out of each other. We felt SO much better. Actually, it was just about as much fun as one can have with their clothes on. All we need now is somewhere we can call and hook up with two other unfortunate souls that we can shoot to hell. There, I feel so much better now.

DoomGate is a cool site where you can get just about any piece of information about Doom that you may want. There is a listing of FTP sites where patches, hacks, WADs and anything else that someone has put together to enhance the Doom playing experience are available. There is an area to get information on writing your own WAD files, sounds, graphics, frontends and other miscellaneous information. There is the Doom forums where you can get information about newsgroups, IRC, mailing lists, BBS doom servers, screen shots, walkthroughs WADs and FAQs. Last but obviously not least, there are links to other Doom and DoomII sites. Good hunting!



**Name:** BOB©WEB!!!  
**URL:** <http://www2.ncsu.edu/unity/users/a/asdamick/www/>  
**Description:**

The Great And Mighty BOB©. Who is BOB© you ask? The BOB© himself is Andrew S. Damic. I could only chuckle as I read the first statement on this page:

"Congratulations. You have linked up with The BOB©. You should now feel good about yourself. If you don't, well, it's not my fault. I have tried my best. You'll just have to blame yourself.

"This page links a whole bunch of cool pages and, of course, information about BOB© himself. There are a bunch of links to .AU files on this page so be sure to have the proper viewer setup. There is also information on setting up your own homepage.

This is the type of creativity and imagination that makes the Web so much fun to cruise. This is only one of hundreds of pages put up by individuals all over the net. They may not be very useful, but some of them are extremely funny and are well worth checking out.

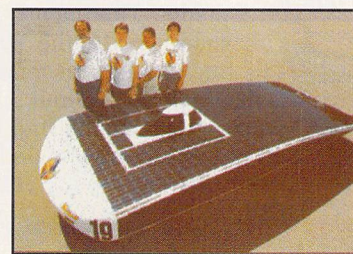
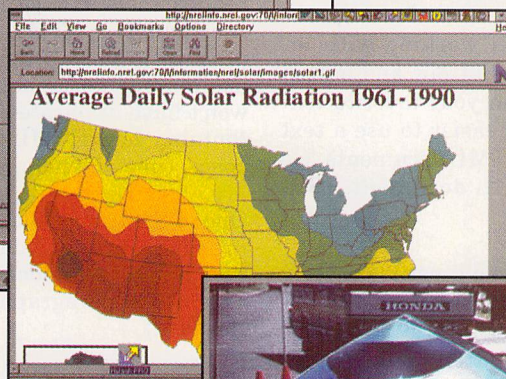
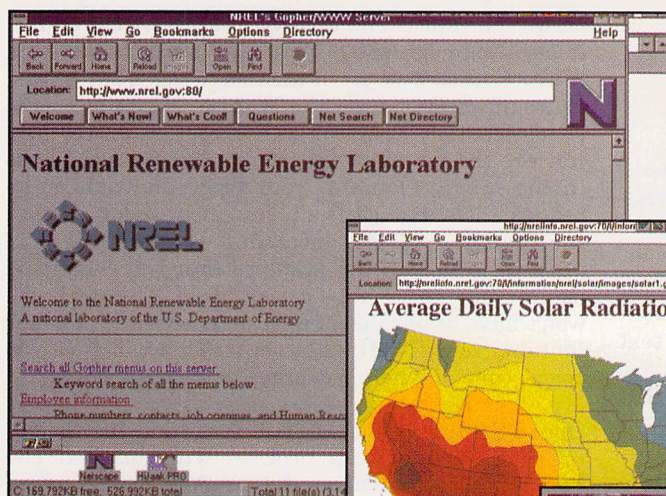
This is all for now. Links to these and other Babb's Bookmarks are available as a bookmark file at Aquila BBS Internet Service WWW server at:

<http://www.aquila.com/chris/chrispix.htm>

If you have any cool sites you would like to see here or any comments, feel free to e-mail me at: [chris.babb@aquila.com](mailto:chris.babb@aquila.com)

Enjoy ♦





## NATIONAL RENEWABLE ENERGY LABORATORY ON THE WEB

by Brian Gallagher

The National Renewable Energy Laboratory (NREL) in Golden, Colorado is keeping the United States at the forefront of cutting edge technologies when it comes to alternative energy resources. With their focus on technologies of tomorrow, it was no great surprise to find they do have a web site, <http://www.nrel.gov:80>, and it is filled with information.

Websters can view information on NREL's background, job openings and budget, all of their on-going programs in wind research, solar research and the production of alternative fuels from non-food crops, to name a few, as well as details about upcoming projects planned for the facility. There are also numerous links to other gophers with energy related information, and an area detailing business opportunities available through NREL.

One project that is particularly enticing with the graphical capabilities of the web is Sunrayce '95, a 1000+ mile race of solar cars, developed by university students from across the nation and Canada. There are projected to be over 40 contestants in the timed race from Indianapolis to the SERF (Solar Energy Research Facility), building on the NREL campus, running from June 20 through June 29.

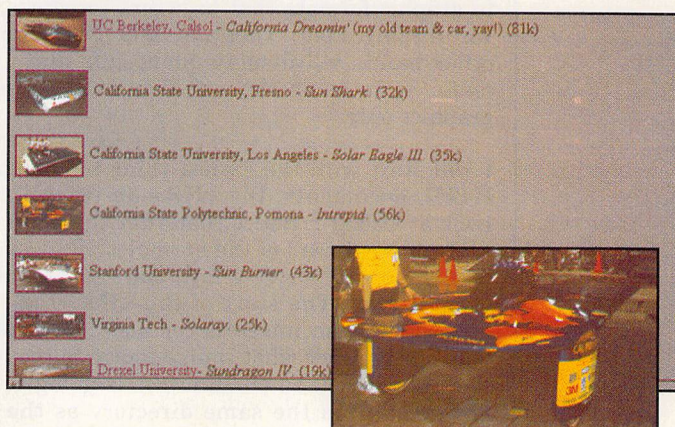
When browsing around the pictures of the cars and their race teams, found either through links on NREL's homepage or by clicking on "teams" on the Sunrayce homepage <http://nrellinfo.nrel.gov:70/1/research/division/pv/sunrayce>, the wedge-shaped, teardrop looking cars are quite a sight to see. In addition to information about the cars and their construction, as one might expect, there are also links to information on university campuses, including MIT (Massachusetts Institute of Technology), Mankato State University in Minnesota, and the New Mexico Institute of Mining and Technology.

One of my favorite pages concerning solar racers is "Matt's Solar Car Page," <http://www-lips.ece.utexas.edu/~delayman/solar.html> run by Matt Powers. Powers, a graduate student at the University of Texas at Austin, and a member of



Berkeley's 1993 solar car team, welcomes images from all other solar racing teams and posts them here for quick and easy perusal. Teams are broken down into three categories - United States, Canada and Other Teams. There are 10 images under the United States icon (a flag), two more under the Canada icon, (also a flag), and still two more under the word "Images," both of these being former champions - the 1987 champion "GM Sunraycer" and the 1993 champion "The Honda Dream."

Dreaming or not, it is terribly refreshing to have a government sponsored agency that has taken advantage of the web and all it has to offer in such a timely, effective and efficient manner. For those who don't have access to the web, the gopher site for NREL is: [gopher.nrel.gov](http://gopher.nrel.gov), or e-mail, [webmaster@nrel.gov](mailto:webmaster@nrel.gov) or for information about Sunrayce 95, e-mail: [sunrayce@nrel.gov](mailto:sunrayce@nrel.gov) ♦







## PUBLISHING ON THE WEB, PART 2

by Michael Erwin

Last month we covered how to create basic HTML World Wide Web documents. This month we will clean up our code a little and start working with inline graphics to create buttons and button bars. Go ahead and open your favorite text editor. I personally find it easier to use a text editor to generate simple HTML documents. Go ahead and start your HTML document. (See Listing 1.)

One of the first things we need to discuss is properly formatted HTML. We can write HTML pages that will be rendered fine but are technically incorrect. Most of the time this does not matter, your browser will render the HTML page correctly. In the future, it will matter, it already does if you use the Arena browser. So we will start writing proper HTML code. Now you are asking what's the difference? Not much but a few minor details. The details will get you every time. You already know to start your HTML documents with an `<HTML>` tag. Right? Look at listing 1, did you notice that `<HEAD>` tag in line 2.(Listing 1) This is used in separating the top part of an HTML page from the rest of the HTML body. This may or may not be interpreted in your current browser.

As with most HTML tags you will have an ending tag in the document. Since we started with the `<HEAD>` tag, we will end with the `</HEAD>`. The only thing in between `<HEAD>` and `</HTML>` is the head elements. In our case it is just the title of the `<HTML>` page, defined by the use of the `<TITLE>` and `</TITLE>` tags. After we have finished our HTML head, we will start the body of the document. So guess what, we use the `<BODY>` tag. (Listing 1)

### LINES & GRAPHICS PIZZAZZ

Now we will start the fun stuff. There are all kinds of uses of graphics in our web pages. Web browsers may view three types of graphics. X bitmaps (.xbm), X paint (.xpm), and .gif. But currently, the web community is undergoing some changes when it comes to graphic formats that browsers recognize. Mosaic will display .xbm, .xpm and .gifs. Netscape, on the other hand, will display .xbm, .gifs and .jpeg formats. So to be on the safe side, will be using .gif graphics only.

I will start with the easiest thing to change in our HTML documents, the `<HR>` horizontal rule tag. Look at Listing 1, notice that after the main heading `<H1>` line, instead of the normal `<HR>` to break the text of our document, I have put a `<IMG SRC="rainbow.gif">` tag. The start of the `<IMG` tag tells our browser that an image is coming. `SRC="rainbow.gif"` tells our browser what source image to request from the web server. So our browser is going to request `rainbow.gif` from the same directory as the current

HTML document and display a rainbow colored line in our document. (See Figure 1.) We could have used `SRC="/lines/rainbow.gif"` in the image tag. Your browser would request from the Web server, to go to the root directory /, in the sub-directory lines, and retrieve the file `rainbow.gif`. If you didn't use the `/lines` in the source element, your browser would have requested `rainbow.gif` from the same directory that the rendered HTML document was in. It is good practice to put all the graphics that you commonly use in your documents in one place. This way you won't have duplicates of a .gif in each directory that contains your HTML documents. This will save you space, time and help you organize your graphics.

One of the things you will notice about using images in HTML is that your browser will not go to the next line after rendering the graphic. That is why I used a `<P>` paragraph tag after the image tag. (See Listing 1.)

We can use these graphics as hyper references within the HTML text. (See Listing 1.) In this example I want to display an icon that represents audio that can be played or downloaded to your machine. Notice the `<A HREF="rickard.wav"><IMG SRC="/icons/3dbuttons/sound.gif" ALT="[ SOUND ]"></A>` in the opening sentence. Let's break it down so that you can see what's going on in this multiple tag element. First we tell the browser that we want to do a hyper reference to a file named `rickard.wav`. This is an audio message from our Editor Rotundus here at Boardwatch.

Figure 1

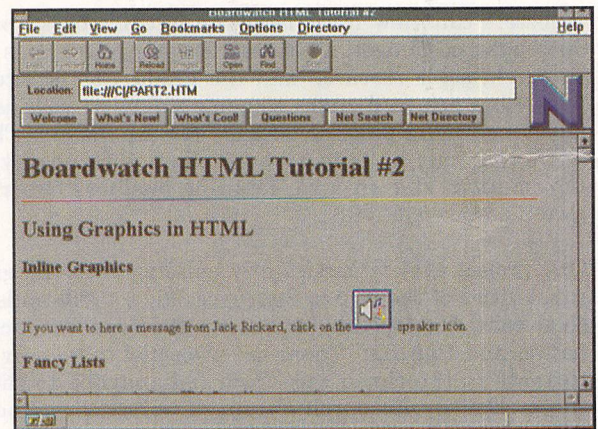
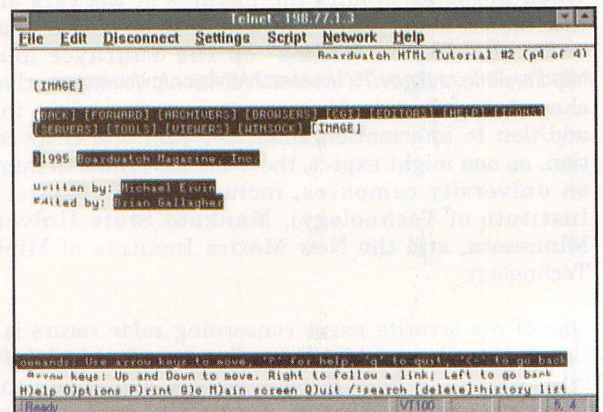


Figure 2





Instead of text being the hyper reference, the browser will display **sound.gif**. (See Figure 2.) If the browser doesn't support in-line graphics, for example the text based browser Lynx, it will display the alternative text "[ SOUND ]" instead of the nice little button. (See Figure 3.) The `</A>` tag tells our browser that it has reached the end of the hyper reference with a closing anchor tag. A little side thought. You do not have to use alternative text to your graphics, but you will not know what browser the end-user will be using to view your HTML documents. I personally feel this is just good netiquette.

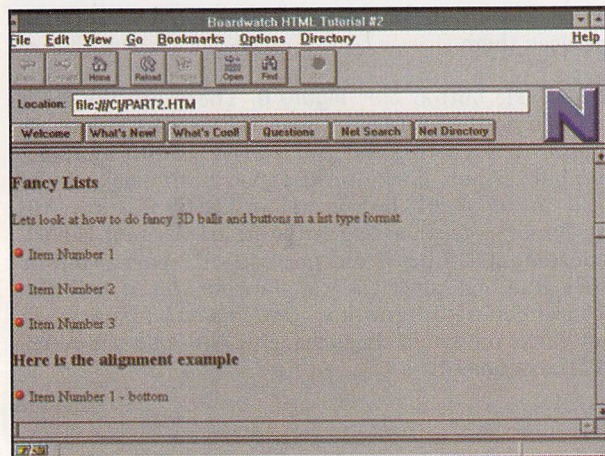


Figure 3

Sometimes you will want to use those nice little 3-D balls for bullets in a list. (See Figure 4.) Notice in Listing 1 the use of in-line graphics to do those fancy bullets. We will start with a basic bullet list. (See Listing 1.) Using just the image tag `<IMG ALIGN=MIDDLE SRC= "/icons/balls/red.gif" ALT="o">` followed by what text we want displayed will result in the list looking like Figure 4. Did you notice the use of the ALIGN element in the image tag. ALIGN has three possible values, BOTTOM, MIDDLE and TOP. Try adjusting this value and view the document with your favorite browser. As always, I prefer Netscape if running Windows or Unix, and IBM's Web Explorer.

The different values adjust where the image is displayed in comparison to the text in that line. For example put a `<H1>` tag before the list and end it with a `</H1>`. (Listing 1.) Compare Figure 4 with Figure 5 to see the difference between the various alignment values. Sometimes you will need to adjust this to get the rendered image to look correct in our HTML document. Oh, I almost forgot, notice that I had to put a `<P>` paragraph tag to start the next bullet item since it really is not a HTML list element. You could also use a `<BR>` break tag to start a new line.

Now let's use these images to do a fancy definition list. (See Listing 1.) Here I started with a `<DL>` definition list tag. After the `<DT>` definition term tag, I put an image tag there followed by what I wanted to define. The first item is the name Jack Rickard. On the following, I used a `<DD>` definition tag to provide more information on Jack Rickard. This produces what is shown in Figure 6. Try playing around with a definition list.

We can do some fancy stuff now. (See Figure 7.) This is a definition list with various .gifs rendered as buttons. The browser can click on the button or the text following the button to load the hyper referenced document. (See Listing 1.)

The only thing you are limited by is your imagination on how to use .gif as buttons.

Let's break down the following from Listing 1.

```
<DL>
<DT><A HREF= "archive/index .htm"> <IMG ALIGN=MID-
DLE SRC= "icons/ 3dbutton/compress.gif">Archivers</A><DD>
Compression Utilities for ARC, LHZ, ZIP & ZOO<P></DL>
```

The `<DL>` tag starts a definition list. This is on a line by itself to make it easier to read. The following line is the `<DT>` definition term tag. The hyper referenced file, **archive.htm** will be loaded if the icon (**compress.gif**), or the text "Archivers" is clicked on by the viewer of the document. Notice that Netscape renders a blue box around the hyper referenced .gif and put a blue line under the anchored text. This may effect the looks of your rendered graphics. The `<DD>` definition tag is followed by the text of what the archivers are. "Compression Utilities for ARC, LHZ, ZIP and ZOO," make sure to turn off the definition list with a closing `</DL>` tag.

Figure 4

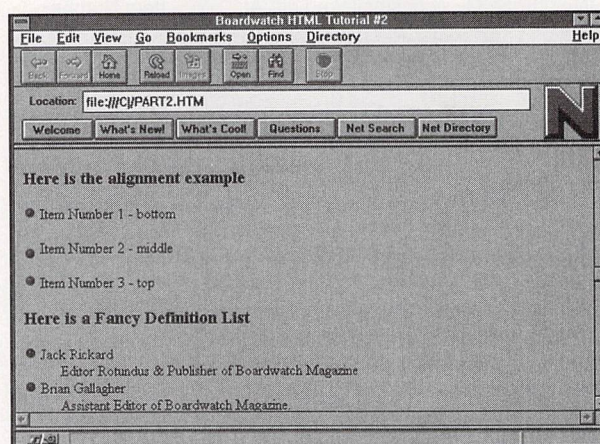
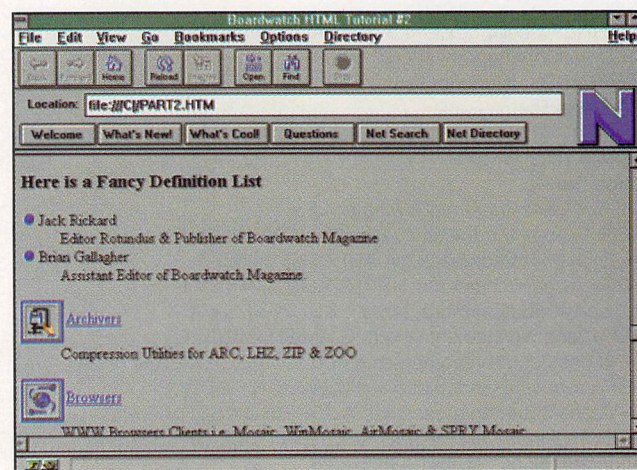


Figure 5



Listing 1

```
<HTML>
<HEAD>
<TITLE>Boardwatch HTML Tutorial #2</TITLE>
</HEAD>
```



```

<BODY>
<H1>Boardwatch HTML Tutorial #2</H1>
<IMG SRC="rainbow.gif"><P>
<H2>Using Graphics in HTML</H2>
<H3>Inline Graphics</H3>
If you want to hear a message from Jack Rickard, click on <A HREF=
"rickard.wav"><IMG
SRC="/icons/3dbuttons/sound.gif" ALT="[ SOUND ]"></A><P>
<P>
<H3>Fancy Lists</H3>
Let's look at how to do fancy 3D balls and buttons in a list type for-
mat.<P>
<P>
<IMG ALIGN=MIDDLE SRC="/icons/balls/red.gif" ALT="o"> Item
Number 1<P>
<IMG ALIGN=MIDDLE SRC="/icons/balls/red.gif" ALT="o"> Item
Number 2<P>
<IMG ALIGN=MIDDLE SRC="/icons/balls/red.gif" ALT="o"> Item
Number 3<P>
<P>
<H1>
<IMG ALIGN=BOTTOM SRC="/icons/balls/red.gif" ALT="o"> Item
Number 1<P>
<IMG ALIGN=MIDDLE SRC="/icons/balls/red.gif" ALT="o"> Item
Number 2<P>
<IMG ALIGN=TOP SRC="/icons/balls/red.gif" ALT="o"> Item Number
3<P>
</H1><P>
Here is a Fancy Definition List<P>
<DL>
<DT><IMG ALIGN=MIDDLE SRC="/icons/balls/blue.gif" ALT="o"> Jack
Rickard
<DD> Editor Rotundus & Publisher of Boardwatch Magazine
<DT><IMG ALIGN=MIDDLE SRC="/icons/balls/blue.gif" ALT="o">
Brian Gallagher
<DD> Assistant Editor of Boardwatch Magazine.
</DL>
<DL>
<DT><A HREF="archive/index.htm"><IMG ALIGN=MIDDLE
SRC="/icons/3dbutton/compress.gif">Archivers</A><DD>
Compression Utilities for ARC, LHZ, ZIP &
ZOO<P>
<DT><A HREF="browsers/index.htm"><IMG ALIGN=MIDDLE
SRC="/icons/3dbutton/mosaic.gif">Browsers</A><DD> WWW
Browsers Clients i.e. Mosaic, WinMosaic,
AirMosaic & SPRY Mosaic<P>
<DT><A HREF="cgi/index.htm"><IMG ALIGN=MIDDLE
SRC="/icons/3dbutton/atwork.gif">CGI
Scripts</A><DD> Working Server Scripts to do Finger, Forms, Mail,
SQL & More<P>
</DL>
<IMG SRC="rainbow.gif"><P>
<!-- Button Bar -->
<IMG SRC="/icons/lines/rainbow2.gif"><P>
<A HREF="/subdir1/index.htm"><IMG ALIGN=MIDDLE
SRC="/icons/3dbutton/back.gif" ALT="[-]"></A>
<A HREF="/subdir2/index.htm"><IMG ALIGN=MIDDLE
SRC="/icons/3dbutton/more_btn.gif" ALT="[->]"></A>
<A HREF="/archive/index.htm"><IMG ALIGN=MIDDLE
SRC="/icons/3dbutton/compress.gif" ALT="[ARCHIVERS]"></A>
<A HREF="/browsers/index.htm"><IMG ALIGN=MIDDLE
SRC="/icons/3dbutton/mosaic.gif" ALT="[BROWSERS]"></A>
<A HREF="/cgi/index.htm"><IMG ALIGN=MIDDLE SRC="/icons/
3dbutton/atwork.gif" ALT="[CGI]"></A>
<A HREF="/tools/index.htm"><IMG ALIGN=MIDDLE SRC="/icons/
3dbutton/html.gif" ALT="[EDITORS]"></A>
<A HREF="/faqs/index.htm"><IMG ALIGN=MIDDLE SRC="/icons/
3dbutton/help_btn.gif" ALT="[HELP]"></A>
<A HREF="/icons/index.htm"><IMG ALIGN=MIDDLE SRC="/icons/
3dbutton/icons.gif" ALT="[ICONS]"></A>
<A HREF="/servers/index.htm"><IMG ALIGN=MIDDLE
SRC="/icons/3dbutton/www.gif" ALT="[SERVERS]"></A>
<A HREF="/tools/index.htm"><IMG ALIGN=MIDDLE SRC="/icons/
3dbutton/tools.gif" ALT="[TOOLS]"></A>

```

```

<A HREF="/viewers/index.htm"><IMG ALIGN=MIDDLE
SRC="/icons/3dbutton/movie.gif" ALT="[VIEWERS]"></A>
<A HREF="/winsock/index.htm"><IMG ALIGN=MIDDLE
SRC="/icons/3dbutton/compass.gif" ALT="[WINSOCK]"></A>
<IMG SRC="/icons/lines/rainbow2.gif"><P>

```

This leads us to the simple way to do effective button bars. Why do you want button bars in your HTML document? Because it looks great and makes your HTML documents look complete. One thing to remember about doing simple button bars is to make them understandable. I have seen some buttons that I didn't have a clue as to what would happen if I pressed them.

Look at the basic button bar, **Figure 8**. These are the most basic and often used variety of icons in HTML documents. So we are going to turn this list horizontal. (See **Figure 7**.) TaDa, one button bar. Looks pretty good huh? Look at the HTML code to make this button bar in **Listing 2**. I am still using the hyper reference tag to point to various HTML icons in documents. Since I did not use <P> paragraph or <BR> break line tags after the </A> anchor tag, it will display these icons in a straight line. (See **Figure 8**.) Now when the viewer clicks on one of these icons, it will load the referenced HTML document.

#### Listing 2

```

<IMG SRC="/icons/lines/rainbow2.gif"><P>

<A HREF="/subdir1/index.htm"><IMG ALIGN=MIDDLE
SRC="/icons/3dbutton/back.gif" ALT="[-]"></A>

<A HREF="/subdir2/index.htm"><IMG ALIGN=MIDDLE
SRC="/icons/3dbutton/more_btn.gif" ALT="[->]"></A>

<A HREF="/archive/index.htm"><IMG ALIGN=MIDDLE
SRC="/icons/3dbutton/compress.gif" ALT="[ARCHIVERS]"></A>

<A HREF="/browsers/index.htm"><IMG ALIGN=MIDDLE
SRC="/icons/3dbutton/mosaic.gif" ALT="[BROWSERS]"></A>

<A HREF="/cgi/index.htm"><IMG ALIGN=MIDDLE SRC="/icons/ 3dbut-
ton/atwork.gif" ALT="[CGI]"></A>

<A HREF="/tools/index.htm"><IMG ALIGN=MIDDLE
SRC="/icons/3dbutton/html.gif" ALT="[EDITORS]"></A>

<A HREF="/faqs/index.htm"><IMG ALIGN=MIDDLE
SRC="/icons/3dbutton/help_btn.gif" ALT="[HELP]"></A>

<A HREF="/icons/index.htm"><IMG ALIGN=MIDDLE
SRC="/icons/3dbutton/icons.gif" ALT="[ICONS]"></A>

<A HREF="/servers/index.htm"><IMG ALIGN=MIDDLE
SRC="/icons/3dbutton/www.gif" ALT="[SERVERS]"></A>

<A HREF="/tools/index.htm"><IMG ALIGN=MIDDLE
SRC="/icons/3dbutton/tools.gif" ALT="[TOOLS]"></A>

<A HREF="/viewers/index.htm"><IMG ALIGN=MIDDLE
SRC="/icons/3dbutton/movie.gif" ALT="[VIEWERS]"></A>

<A HREF="/winsock/index.htm"><IMG ALIGN=MIDDLE
SRC="/icons/3dbutton/compass.gif" ALT="[WINSOCK]"></A>

<IMG SRC="/icons/lines/rainbow2.gif"><P>

```



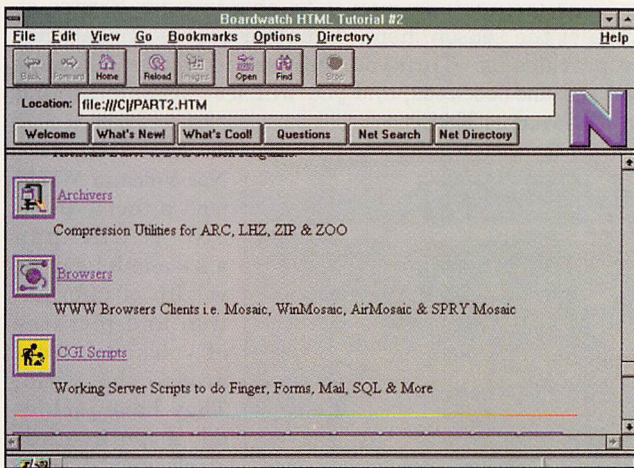


Figure 6

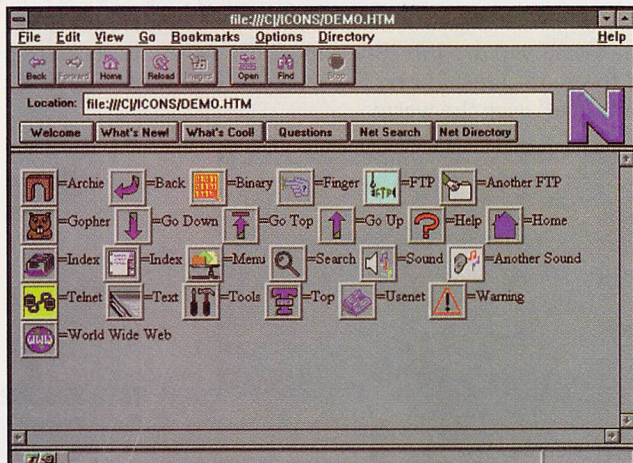


Figure 7

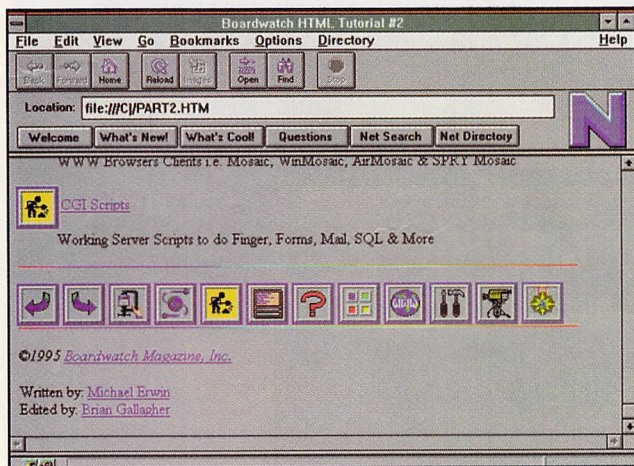


Figure 8

Some things to think about when doing simple button bars. When you use the back, forward and top style of icons, remember to change the referenced HTML documents. If you copy the button bar text into the bottom of another HTML document, you probably will need to change what's behind the current document and what would be the next document. Also remember to ALWAYS have a help button/icon on every button bar you write. Your help HTML document should have a listing of each button/icon with a description of what each button does, especially if it isn't obvious.

Remember earlier when I talked about using netiquette when displaying graphics. By using alternative text to the graphics that, when rendered by a text based browser, will be displayed instead of the graphic. I used [ and ] followed by a space to make a text based button bar. But you can use | to separate the text. This helps to make your HTML documents look more professional. Try experimenting with these icons. You can download these example icons from anonymous ftp from [access.mountain.net/pub/icons](http://access.mountain.net/pub/icons).

By trying different combinations of icons and text for simple button bars, you will find a nice set of buttons for your documents. When you have decided on a set of buttons for a volume of HTML documents, you will want to use them throughout the volume. An easy way to generate button bar code is to write it in a separate text file. This way you can just import the text or use the clipboard and cut and copy the text into your HTML documents. By using a nice button bar in your HTML documents, you will show a finished document to the viewer. This will further show the viewer that this is a professionally done WWW site. Granted, your information is the most important part of your WWW document, but the details will put the finishing touches on that information.

While we are on the subject of finishing touches, let's finish up this HTML document. OK? After the button bar code is inserted into our document, we will put the same additional information at the bottom of the document. (See Listing 1.) Notice the `<!-- Insert Text Here -->` tags. Take a second and think about what kind of tag this is. Right, HTML remarks. Most of the time, any text inbetween the opening `<!--` remark tag and the closing `-->` tag, will be ignored.

The `<EM>` tags are probably new to you, these are emphasis tags. They are rendered differently, depending on the browser used to view the document. Graphical browsers normally render these tags as italics while on text based browsers it might be underlined. I suggest that you use `<EM>` any time you want to do emphasis on displayed text. `<EM>` is normally handled better than the `<I>` italics tag in text based browsers. Remember netiquette!

Last month I asked you to figure out what the `&#169` did. It makes a nice little copyright symbol. (Figure 8) The `&` tells your browser to display the character `#169`. This is not quite ASCII, but ISO 8859 code. Go figure huh. If you want to know more about ISO 8859, point your browser to URL: <http://www.uni-passau.de/~ramsch/iso8859-1.html>

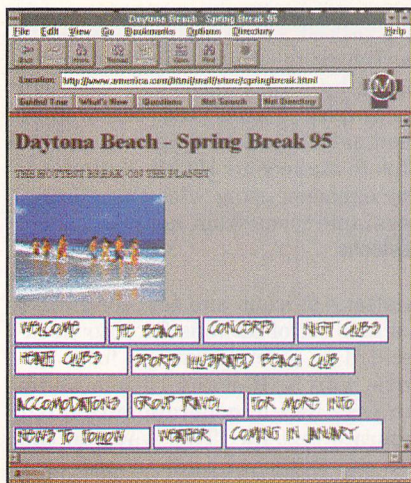
That about raps it up for this month's article. We have covered a lot of information. In-Line graphics, alternative text, hyper referenced graphics, graphic alignment, simple button bars and a few miscellaneous tags. You need to take some time and work with this information. You will find new ways to use these ideas and tags the more you work with them. Till next time...◆

## WEB SITES

by Hope N. Tillman & Walt Howe

As the winter starts to lose its grip and our thoughts turn to spring vacations and the possibility of a baseball season, we offer a set of web sites to compliment the season.





Our first selection is the Spring Break Web Page from Daytona Beach. For those of us in the colder states, this selection is a welcome one. Perhaps you are the right age to enjoy a spring break from school, or just wish you were. The accompanying beach graphic speaks for itself. If you can, go to Daytona or any other warm weather site and enjoy yourself.

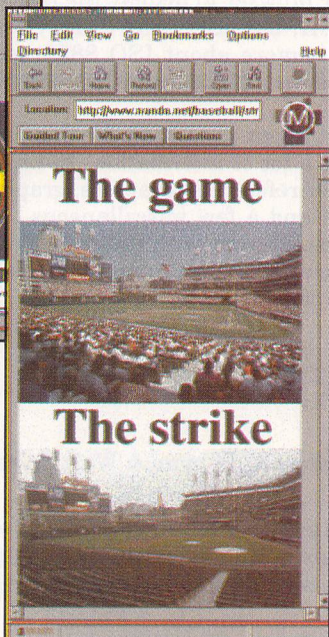
But if you can't, enjoy a virtual vacation, courtesy of this site. The site is well designed, and if you have a text only browser, you can still access all the information on such things as night clubs, concerts, places to stay, travel services, health clubs and lots more.

You will find this web site at URL <http://www.america.com/html/mall/store/springbreak.html>

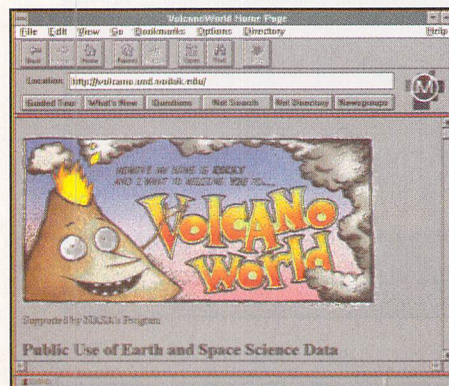
If spring break just isn't on the schedule for web watchers looking for an end to winter, we offer a change in direction to one of the most popular but serious problems of the season. Perhaps when you read this, the baseball strike will be settled, and the training camps will find the veterans back, getting ready to start the season. If that is so, the following web site will be an entertaining look at spring training and the coming season. But if the problems are unsettled, the turmoil will continue, and the screens we show are appropriate. You can access the information readily from a text-only browser.



Look for this and connecting URL addresses:  
<http://www.nando.net/baseball/bbmain.html>

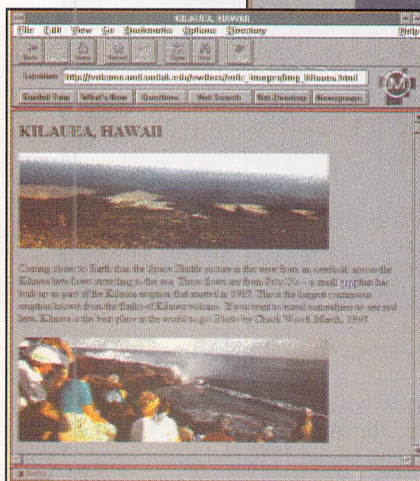
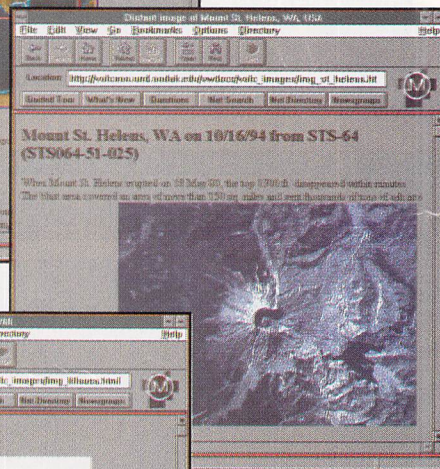
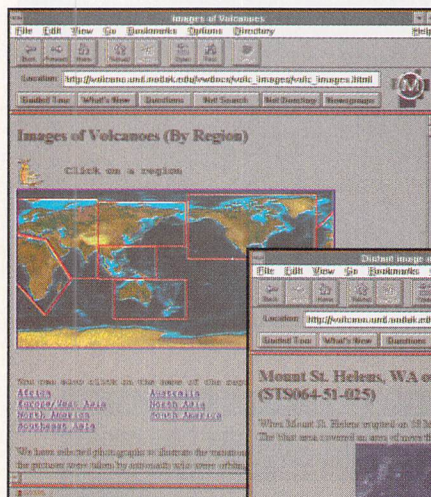


If you aren't fortunate enough to be able to enjoy Florida at this time of the season, here is another source of heat that nature provides us. Turn your browser to North Dakota at <http://volcano.und.nodak.edu>, and you will see this entertaining screen prepared by NASA.



No, Volcano World isn't a theme park, but NASA has assembled a wealth of information and pictures of volcanoes from around the world. They have included a point-and-click world map that lets you visit the resources for whatever part of

the world you are interested in. Click on an appropriate part of the map that follows, and you can find where to visit volcanoes all over the world.



Click on North America, and your choices include Mount Saint Helens (the topless one in the first picture after the map) or Kilauea in Hawaii (the second one).

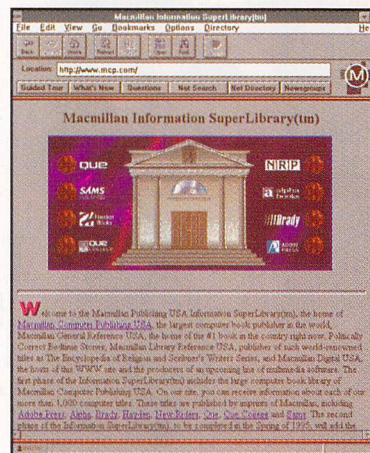


There are lots more where these came from. If you are using a text-only browser, you will not be able to use the interactive map or the dramatic pictures, but there is still a wealth of information in text form and many of the pictures are downloadable. But it is much more appealing in the graphics modes.



If your tastes in recreation run to indoor pursuits, such as pinball, this Swedish web site may interest you. You will find all sorts of information about pinball machines, both current and historical. There is a pinball FAQ on the menu to record your knowledge of the game and the machines. The site is useful whether you have a graphics or a text browser. This bucolic site is at <http://www.lysator.liu.se/pinball>

Our final selection for this month is the new Macmillan Information Super Library. It is the largest publisher of computer books in the World. It doesn't particularly fit our end of winter theme, but computers and books about computers are always in season. They have a large and growing catalog, and if you have forms support, it is fully searchable. The site is just as usable in either graphics or text mode. They are reachable at <http://www.mcp.com/>



Hope Tillman and Walt Howe are a married couple who met in cyberspace and still enjoy spending time there together. Hope is Director of Libraries at Babson College, a Director of the Special Libraries Association, and an Internet author and consultant. She is the co-author of the book Internet and Special Librarians. Hope's Babson College gopher is well known for its Internet Business Resources menu. Point your gopher or browser to URL [gopher://gopher.babson.edu](http://gopher://gopher.babson.edu) She also maintains a comprehensive Internet Bibliography for Internet users. You can reach Hope at e-mail address [tillman@babson.edu](mailto:tillman@babson.edu)

Walt is DELPHI Internet Services' Internet SIG Manager. See the Delphi column for more information about Walt. ♦

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Boardwatch - March 1995 49



# PEOPLE ONLINE by Phyllis Phlegar

## THE GIFT THAT KEEPS ON GIVING...BBS-STYLE



Phyllis Phlegar is a graduate of the University of North Carolina at Chapel Hill, and also holds a private pilot's license. She is a freelance announcer and her work can be heard on Business Radio Network, National Public Radio and the Armed Forces Radio Network. Phyllis' book *Love Online* is now available from Addison Wesley Publishing Company.

Write to Phyllis, at XHBG67A on Prodigy, P.Phlegar on GEnie, Phlegar on Delphi, P Phlegar on AOL, 71562,407 on CompuServe or at phyllis@cris.com on the Internet.

In early 1971, I was in the second semester of my freshman year at the University of North Carolina at Chapel Hill. I was working my way through school, money was either tight or non-existent, and just when I thought things couldn't get much worse, I hurt my foot playing basketball one weekend and ended up on crutches.

If you've ever been to the UNC-CH campus, you know it's fairly large, and I lived on South Campus, near where the Dean Dome would be built years later. I worked as a ticket seller at the local "artsy" movie theater in town, which was a long walk from the dorm, and many of my classes. Longer still on crutches. Close to impossible actually, and regular use of the bus was not really an option, at ten cents a ride. Remember, this was 1971.

On Monday, I found a friend of a friend who had a bicycle for sale for \$6. I had \$8 to last me until payday - Thursday, at the theater. I ate very little that week...I seem to recall an all-you-can-eat spaghetti dinner for \$1 that Wednesday night where I stayed a long, long time.

But it was worth it...my funky little "buzz" bike (not even a proper adult's bicycle!) got me from my dorm

to work in ten minutes! I'd strap the crutches to the long banana seat and peddle with one foot, mostly. It was quite a sight I am sure, but I didn't care, it got the job done...my studies and work schedule went essentially uninterrupted.

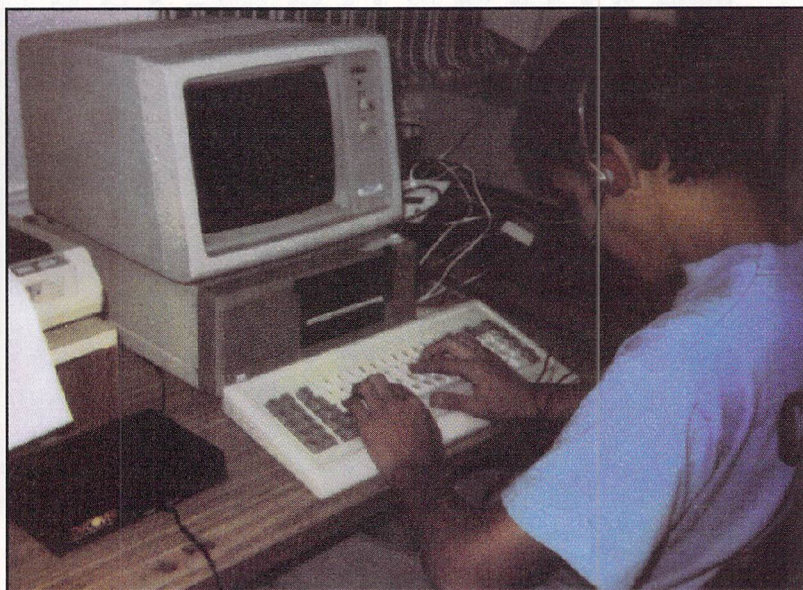
At about the same time, Bonnie Snyder was getting ready to graduate from the Eastman School of Music.

Today, Bonnie is the Educational Technologist for the Colorado School for the Deaf and the Blind (CSDB) and the sysop of the CSDB BBS, (719)632-8180. She began teaching music shortly after graduation from Eastman. In the next few years, she got married, and eventually accepted a job teaching music at the CSDB. A few budget cuts later, Bonnie was also teaching regular classroom work and became interested in computers. Time check: her first computer was a TI 99-4a.

A few flukes later, she was working with both the deaf kids and blind kids using adaptive technology. Both of these groups of individuals find a freedom of expression with a keyboard that often overcomes their lack of sight, or lack of hearing. Through the school's BBS ("CSDB BBS"), these kids can go online and interact with a wealth of individuals that ordinarily would not be available to them...and they can express themselves in a way not possible face to

face. One particularly bright blind junior high student had the enriching opportunity to speak with, and learn from a published author, and an older sightless student who was on her way to college. Bonnie loves it and remarked "A sense of independence and self-reliance can be realized through the computer BBSs."

This same blind student managed to adapt his Braille 'N Speak to go online, and using a modem gets onto the CSDB BBS and uploads his work. She wants to make him her assistant sysop but...he has no computer, and right now, he really needs one. I thought, if I hadn't given my old 286 laptop to my sister, it would have been tough to not just tell her I'd give it to him.



**16-year-old Derrick Clausen uses speech synthesizer to communicate in his sightless world**



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Coincidentally, I saw an ad for a computer like my old one for about \$300. Three hundred dollars! Is it too much to ask that someone donate such a computer to this precocious young man? Three hundred dollars would buy a lot of things, but what a difference it would make in one person's life. What an inexpensive investment in society. In my opinion.

For the great majority, modern science can't restore sight to the blind, but online, the lack of sight doesn't really matter...as long as you have enough money for the equipment. And there's the rub! How many minds are lost to society for the want of a few dollars?! Too many sighted people think that the blind would be better off if they could see, the deaf better if they could hear, and that's how they deal with the issue. They may donate money to research to restore sight and hearing, but forget that the real contribution now would be to work with what the blind/deaf do have at their disposal...their minds, and all they need to bridge the gap is a computer, the appropriate hardware and software.

For much of the deaf, there is a shared bond of culture and language and they don't consider a loss of hearing a disability.

As one member of the CSDB BBS said, the deaf can't imagine a world without the voice and beauty of sign language and visual expression, and they don't long for a world of sound. "In order to understand deafness, one must be prepared to listen to what the deaf community has to share."

And the computer also opens up the world for the deaf. This past Christmas, the CSDB BBS went down, and Bonnie trudged in and got it back up and running. A few minutes later, a call came in and Bonnie wondered who it could be, so she switched to chat mode.

It was a deaf teenager, originally from Sweden who was now in Israel. He spoke perfect English, with syntax to make Bonnie blush. Without BBSing, how else would a deaf student have the opportunity to converse freely all around the world? The same is true of the blind, and all of us, of course, but BBS communications add to the lives of the non-handicapped. For the deaf and

the blind, it is communication...with only a keyboard in between.

I attended one of Bonnie's adaptive technology demonstrations last year, at a local PC users group of which she has also been president. The software and equipment demonstrated was great, but what stuck in my mind was how most of this great stuff wasn't being used by the very people it was made for because of money. Some of the prices were outrageous, partially because of a few catch-22s, the biggest being the apparent lack of mass appeal for these items, so they remain pricey. As long as they remain pricey, many of the blind and the deaf can't afford them. And they can't afford them as long as they can't become taxpaying citizens with good jobs, jobs they might have if they had the technology that as of now, they can't afford. Most of Bonnie's students want to contribute to society at large, and all they need is a computer and modem to communicate, along with the software and equipment to "talk" as their interface.

It gets worse. Bonnie told me about the newest software for the sightless, a utility that allows the blind to "see" Windows applications. Wow, great stuff, I could think of many people who would benefit by such a program, once the bugs were worked out. But as usual, this new software, (as is much of the hardware and software for the blind) is prohibitively expensive.

It started me wondering again, how many minds were going to waste for the want of a reasonable amount of money.

It comes down to this: a lot of blind/deaf people could soar through cyberspace and many work spaces too...making use of their brains and individual talents with the right software and equipment. They just need money. A little publicity wouldn't hurt either. And here was the last rub.

Last year, Bonnie was invited to The White House to give a demonstration of adaptive technology, but it was postponed and tentatively re-scheduled for sometime this year. Last year, the school had the money in its budget to send her, but this year, there is no money. No money, no demo. No demo, no publicity. No publicity, no money to buy equipment and software.

The cost of a plane ticket to DC, lodging and transportation...could the money be raised in a few months? And the CSDB needs...more phone lines, (the BBS stays very busy with just the one), an 800 number at least available to users statewide or an Internet connection for telnetting, 386SX and 386DX, 286, even 8088!...modems and laptops...computers WITH hard drives would be ideal because Bonnie can place electronic book readers on them, along with the telecom stuff, so that eventually the kids can have their textbooks in electronic format. Speech stuff can be reasonably affordable, but Braille displays are soooooo expensive that any help in getting those for the kids would be marvelous! Most of Bonnie's brighter blind kids prefer Braille as their primary reading medium and it actually is better for teaching spelling skills than using speech.

So, have you got any of this stuff? How about a few extra bucks that would go a long way? Contact Bonnie at The Colorado School for the Deaf and the Blind, 33 N. Institute Street, Colorado Springs, CO 80903-3599. Make checks payable to CSDB. She's also reachable by phone at (719)578-2215 or online at [bonnie.snyder@f93.n128.z1.fidonet.org](mailto:bonnie.snyder@f93.n128.z1.fidonet.org) (1=the number one, not the letter "L").

For six bucks, I got my bike, my "ride" on the only "information highway" available at the time, bum foot and all. Without the bike, I couldn't make it to class or work, and my college career could have been cut short.

When my foot healed, I sold that bike for ten bucks, and found another, better bike for the same money. Later, I sold the ten buck bike for \$15 and upgraded again, bigger, better faster. I graduated by the time I was 21.

So, here I am, some 20 plus years later...asking you to buy a kid a bike.





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| Interchange 1.1  | 115.95    |
| TIMS 1.1         | 115.95    |
| UltraChat 1.0    | 165.95    |
| PIMP 3.x         | 250.95    |
| CIMS 1.0[4]      | 75.00     |
| CIMS 1.0[16]     | 125.00    |
| CIMS 1.0[32]     | 175.00    |
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| FTSPRO File System   | 99.95     |
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| FRS File Retrieval   | 39.95     |
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| RIPaint v1.54        | 150.95    |
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| DIGIBoard 8 16550    | 459.95    |
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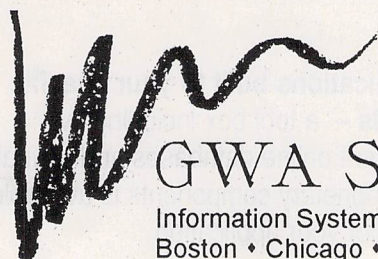
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|------------------------------|------------|------------|-----------|----------|---------|
| Node license*                | \$299      | \$799      | \$440     | \$508    | \$895   |
| Programmable                 | Yes        | No         | Extra     | Extra    | Extra   |
| Multiple command shells      | Yes        | No         | No        | No       | No      |
| Intelligent DigiBoard        | Yes        | Yes        | Yes       | No       | No      |
| Int'l 4h device support      | Yes        | No         | Yes       | No       | No      |
| Standard serial ports        | Up to 10   | No         | Up to 4   | Up to 2  | Up to 2 |
| Caller ID security           | Yes        | No         | Extra     | Extra    | No      |
| Nested security logic        | Yes        | No         | No        | No       | No      |
| Multichannel chat            | Yes        | Extra      | Yes       | Yes      | Yes     |
| Private user chat            | Yes        | No         | Extra     | Yes      | Yes     |
| Offline reader support       | Yes        | Yes        | Extra     | Yes      | Extra   |
| QWK networking               | Yes        | Yes        | Extra     | No       | Yes     |
| FidoNet import/export        | Yes        | Yes        | Yes       | Yes      | Yes     |
| PostLink (RIME) support      | Yes        | Extra      | Yes       | Extra    | No      |
| Includes RIPscrip menus      | Yes        | Yes        | No        | Yes      | No      |
| Novell/DOS LAN support       | Yes        | Yes        | Yes       | Yes      | No      |
| Enhanced CD-ROM support      | Yes        | Yes        | Yes       | No       | No      |
| Incoming FAX support         | Yes        | No         | No        | No       | No      |
| Chat between doors           | Yes        | No         | No        | Yes      | No      |
| Bidirectional file transfers | Yes        | Yes        | Yes       | No       | No      |
| DOS door support             | 11 types   | 2 types    | 2 types   | No       | No      |
| FILE.ID.DIZ support          | Yes        | Extra      | Yes       | Yes      | No      |
| Offline NetMail              | Yes        | Yes        | Extra     | No       | Yes     |
| Offline/Remote file requests | Yes        | No         | No        | No       | No      |
| Real-time configuration      | Yes        | No         | Yes       | No       | No      |

Features and prices compiled from vendor supplied information 2/94, are subject to change without notification. Wildcat!IM, PCBoard/M, MajorBBS, TBBS, QWK, FidoNet, PostLink, RIME, RIPscrip, Novell, and DOS are trademarks or their respective companies. Third party utilities may be required for some message network technologies.

\* for 8 nodes Wildcat!IM requires a 250 node license, PCBoard/M requires a 10 node license, TBBS requires a 16 node license.

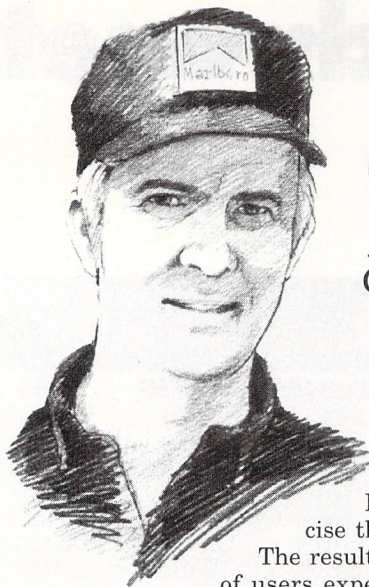
If you haven't checked out Synchronet yet, crank up your modem and download a demo. There isn't a faster, more feature rich BBS available anywhere from anyone. Synchronet combines the robust interactive nature of a multiuser BBS with the speed, power and flexibility of a multinode system.

It was innovative out-of-the-box features such as intelligent variable timeslicing, ARS<sup>TM</sup> security, RIPscrip, enhanced CD-ROM, and easy to use fully integrated message network support that made Synchronet a multinode powerhouse. And now, with version 2.0, custom programmability, lightning fast high volume messaging, and much more makes Synchronet *the* sysop's choice for BBSing in the 90's.



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# TECHNOLOGY FRONT

by Jim Thompson  
Western News Service

## GALACTICOMM UNVEILS WORLDGROUP: AOL on a PC

The entertainment and information world of today, whether that be online or in a live setting, is one of colors, graphics, video and sound. Trying to force a text-based BBS system into this mold is an exercise that is difficult and frustrating at best.

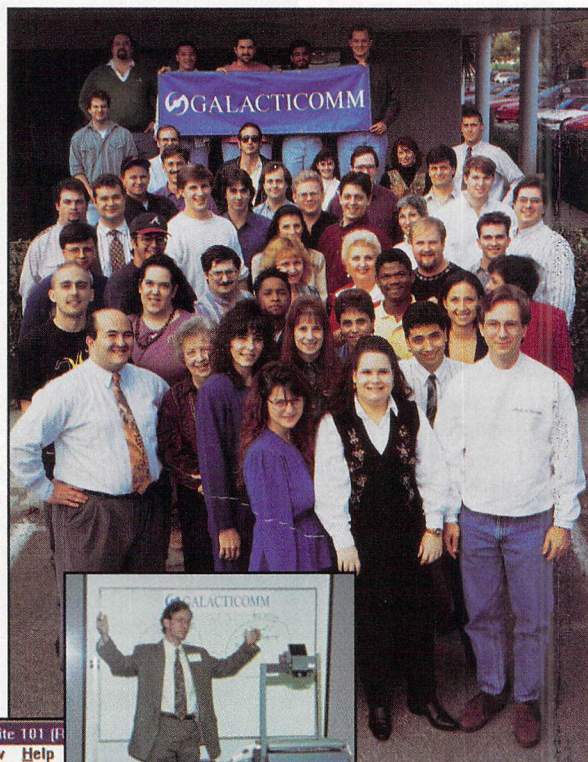
The result is generally a system that falls short of users expectations and ultimately results in a loss of revenue for the sysop.

Simply put, to be competitive in today's online arena, SYSOPS need to offer customers a graphical interface (GUI) that is not only attractive but fast, efficient and intuitive.

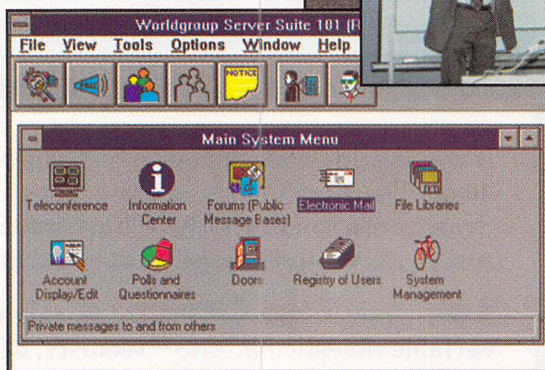
Galacticomm, the makers of The Major BBS, have developed just such a system. In an industry that has more "leaks" than an old Jaguar, Galacticomm managed to keep their project under a tight veil of secrecy. Originally called "Project Victory," this client/server program is now called "Worldgroup." As of the writing of this article, the program was in the pre-beta stage. There were some minor problems, but even in this early stage of development, the program was remarkably stable.

Worldgroup is impressive. It provides an intuitive graphical user interface and the power of a client/server environment while still retaining compatibility for ANSI and RIP users. Many BBS operators have not moved to a client/server system simply because it can eliminate many of their existing users. In some cases, users refuse to move to Windows, in other cases, they do not have the resources to run such programs. Galacticomm has wisely decided that everyone should have the chance to play.

Callers who are using their Windows client program, called Worldgroup Manager, can take advantage of the full power of a GUI, multitasking environment. Callers who do not run Worldgroup Manager can access the system via a conventional terminal mode with access to menus and information presented in text, ANSI and/or RIP.



**Scott Brinker,  
President/CEO  
of Galacticomm  
and a proud crew**



**Main Menu of Galacticomm's New  
Worldgroup BBS package**

### FAMILIAR SERVER ENVIRONMENT

The Major BBS version 6.x is the foundation of the Worldgroup server. Sysops currently running The Major BBS will find this comfortable and easy when it comes to setup and main-

tenance. For callers, it means an easy way to make the transition to the new GUI. They can continue to use the BBS as they have in the past. When they are ready (or have upgraded their equipment to accommodate the new requirements) they can jump into the GUI fast lane.

All the familiar sysop features are available from the console. The one thing you cannot do is logon from the local console and emulate a Worldgroup session. Since the system transfers data in Dynapaks, you might recognize some letters or characters, but generally it will make little sense.

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It's about the same as using the DOS "type" command to display an ".EXE" file. (This same problem occurs when attempting to display RIP graphics.) The only way to use the GUI interface is to call in remotely or via a LAN. Galacticomm reportedly plans to add this local console viewing at a future date.

As noted, the features available to a sysop from the console include all those found in version 6.x of The Major BBS. These include extensive user monitoring and configuration tools, accounting functions and tools for the generation of statistical data. All of this in a format that current Major BBS sysops will find comfortable.

A number of the Sysop features (creating a Forum, Library, new Poll or Door) are available in client/server. Those that are not are available in "terminal mode."

Also available in Worldgroup is connectivity via serial cables, Novell SPX LAN and modems. Add-on modules allow for connectivity via X.25, UUCP and TCP/IP. Galacticomm's Internet Connectivity Option Module will reportedly provide WWW, telnet and FTP services.

The protocol (called the Galacticomm Client/Server Protocol or GCSP) being used was written specifically for Worldgroup. It is full duplex allowing for data to be transferred in both directions. "It also has a certain amount of windowing built into it and some very high level error checking including 32-bit CRC checking. We took some of the best features of other protocols and built them into this model," says Scott Brinker, President and CEO of Galacticomm.

## CLIENT SOFTWARE

While the server may be the operational heart of the system, the client program is truly the soul.

Traditional terminal software provides access to remote information, but little in the way of intelligence. Such programs must be online in order to accomplish any meaningful work. Once connected, the remote host (or server) does all the work reducing the local console to little more than a "dumb" terminal. The same data has to be transmitted many times in a single session. For example, the same ANSI or RIP menu will be sent each time a user moves to the area in question. The



## Worldgroup Manager Client

result is a highly inefficient system of transmission.

Under a client/server environment, the duties of communicating are split between the two sides. Since each side can process and understand information, the amount of data that is transferred is kept to a minimum. Graphics are a prime example. Instead of sending the same material each time it is requested, the information is transmitted once and displayed by the local machine (the client) when needed.

Under client/server only new data needs to be transmitted. It also allows for information to be transferred "in the background" while the caller reads messages or performs some other function.

Most online time is spent reading information or performing a function (like writing a message) which does not require the power and resources of the host computer. Under client/server, such functions are handled by the caller's machine while the host concerns itself with more "processor intensive" tasks.

Worldgroup Manager, the client program, is a Windows application. I ran it under Windows for Work Groups, Windows NT and OS/2 with no problems. Client programs that will run on the Macintosh and Unix platforms are reportedly under consideration.

"I understand that Microsoft will be releasing Visual Basic for the Macintosh which will be fully compatible with the PC version. If this is true, it will allow us to bring the full features of this and other programs into the Mac environment. This possibility is truly exciting to us," Brinker says.

As an interim step, Galacticomm plans to get the communications drivers working in an "emulation mode" on

platforms like the PowerMac.

In my view, if Galacticomm is to make this a truly universal platform, a Macintosh version is imperative. Because of the rapid growth of the Internet, a Unix version is also something that should be more than just a "consideration."

## ICON DRIVER INTERFACE

A caller who connects via the Worldgroup Manager is presented with a typical Windows environment and a series of services represented by icons. If the caller has connected in the past, the icons appear immediately since they reside on the client machine and don't have to be downloaded. If new services have been added since the last call or items have changed, the new icons or information is automatically sent to the user. This same "intelligence" also ensures that a user has the latest version of the software. The server polls the client and checks for the version number. If a newer version is available, the user is given a choice of receiving it or it is downloaded automatically.

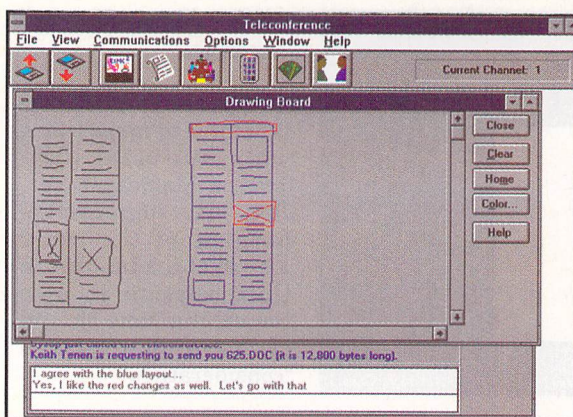
In many cases, a user's first interaction with the Worldgroup system will be offline via the client program. A user can prepare mail messages or files for upload before making a connection. When a connection is needed for an operation (for example to retrieve mail or to join a teleconference) a call is automatically initiated and his request is immediately executed.

A user who initiates his/her own call, is taken to the Main Menu once connected. The pre-beta version includes nine areas represented by icons. These areas include: Teleconference, Information Center, Forums (Public Message Bases), Electronic Mail, File Libraries, Account Display/Edit, Polls and Questionnaires, Doors and a Registry of Users.

## MULTI-CHANNEL CHAT

The Teleconference provides multi-channel chat facilities. All of the standard features are here. A split-screen mode allows a caller to type in responses to comments he/she sees in the corresponding window. A floating window can also be opened which displays a list of the callers on the channel. Whispers





### Multi-user teleconference features a drawing board

or private chat requests are displayed in a different color than the normal text. The user can also scan other channels to see who is online or to see the current topic.

One nice feature is the ability to send files to and receive files from other users. If both parties agree to the transfer, the file is sent in the background. Both users can continue to take part in the teleconference while the download is in progress.

One addition that I love is a drawing board. The drawing board can be opened along with the conversation window(s). It allows one to actually draw things that can be seen by another caller. I found this fascinating. To watch a picture appear as it is being drawn is a real kick. Not only can you see the drawing as it unfolds, you can even choose from a pallet of colors in which to work. One can print the artwork or take a snapshot of it at any time.

During one session, I was downloading a file in the background, chatting with another user and using the drawing board all at the same time. That is what I call an intelligent use of resources.

In addition to an icon for the drawing board, there is an icon for a scrollback buffer, another to get a list of the current users on the system, one to switch channels, one that allows you to scan available channels and one to move to a private one-on-one chat mode.

### FORUMS

More than 10,000 Forums (both local and networked) can be created on a single Worldgroup system. The list of features in the Forum area is impressive. Messages are organized in both chronological order and by topic

"threads." One can also view a map of the threads of a particular conversation. When reading a message, a user can post a public reply, send a private e-mail response to the author, file the message away, edit/delete the message (if the reader is also the author) or send a copy to someone else. There is also an option to attach a file to any message sent.

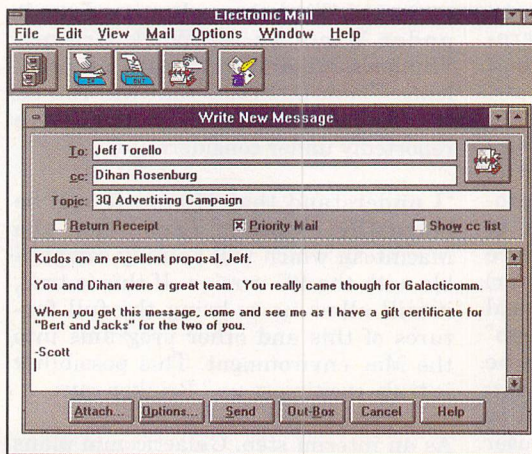
The "scan" feature allows one to choose new messages, messages with a particular date or only messages sent to or from him/her. One can also initiate a keyword search for particular messages. Access to the Address Book is available from the Forum area making it easy to find a user or to access notes or information about a particular user.

### EXTENSIVE E-MAIL FEATURES

The e-mail features are both robust and easy to use. An icon tool bar offers easy access to the most common functions including writing a message, checking the "in box" and/or "out box," retrieving stored messages from a filing cabinet and accessing an address book.

When writing a message, check boxes are available for requesting a return receipt, marking the message as priority and indicating whether or not to show the list of carbon copy addresses to each recipient.

One also has the option of attaching a file to the message, sending it immediately or holding it in an "out box" for

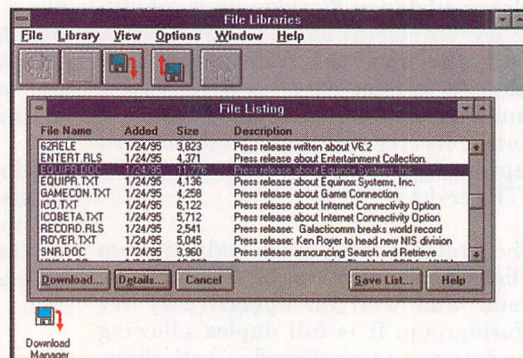


### Worldgroup e-mail

later transmission. When reading mail, the caller can see the list of messages, the author, date and topic. A "Get New Mail" icon signals the server to download new messages in the background. One can reply to messages, delete them, file them, download attachments, follow the thread of a message or move the address to the address book.

### FILE LIBRARIES

As many file libraries as needed can be created under Worldgroup, including libraries located on network drives and CDROM drives. A "Find Files" command allows the caller to search libraries for files by date, file name, keywords or popularity. A button marked "Details" displays the description of an individual file. This description includes the file size, description, number of downloads, date added, etc. Files can be tagged for immediate



### Worldgroup file libraries

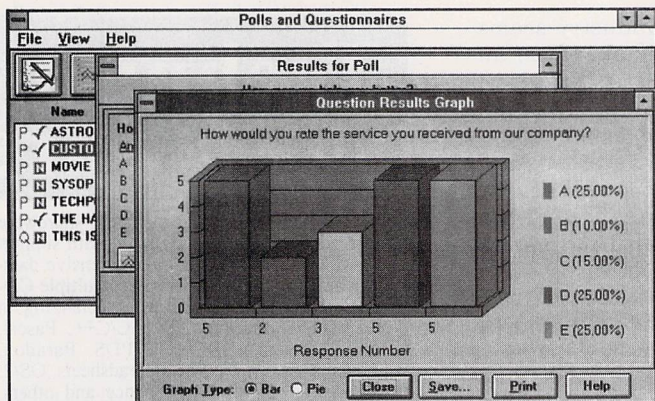
download or for downloading at a later time.

Surveys and user feedback can be collected and compiled in the Polls and Questionnaires area. Results from a poll or questionnaire can be displayed visually by selecting the graph mode. These graphs (either bar or pie) can be printed or saved to disk for use in other applications.

The Registry of Users is like a system-wide phone book. Here users can make information about themselves available to others. The list of names can be searched and/or sorted. Clicking on a name reveals a detailed record.

The Doors command allows DOS programs to be run on a machine attached to the server via a dedicated serial cable.





**Polls and Questionnaires area displays graphical results**

When running a Door, the caller is put into terminal mode.

All of the options and features detailed above were available in the pre-release version that I tested. But remember this was a pre-beta version and all of this is subject to change. Galacticomm was working on a number of new ideas and possibilities at the time of this writing. While the basic package of services will probably not change substantially, I would not be surprised if the final release version doesn't contain a number of enhancements.

One of Worldgroup's strengths is its compatibility with existing add-on applications designed for The Major BBS. When a non-client/server application is run, the caller moves from the client/server environment to an ASCII/ANSI window. The application is run in the same manner as under version 6.x of The Major BBS.

The low level code and communications utilities of the Worldgroup client program is written in Borland C and Assembly. However, Visual Basic was used to create most of the user interface. This is where the real power of Worldgroup lies. Using Visual Basic for Windows, third-party developers can quickly and easily create new applications that work in conjunction with the client program.

In fact, a wealth of programs already commercially available could be plugged into the client program almost immediately. This opens a whole new world of possibilities. Already available are programs that allow for the transfer and display of images and photos of all types (JPEG, GIF, TGA, TIFF, PCX, BMP, etc.). There are programs that can transfer/display video clips and play sound files. Database programs that read and write standard dBASE-type (DBF) files and programs that can

add full word processing capabilities to the Worldgroup message area are available and I have no doubt that many, many others will be developed.

This opens the way for some very sophisticated online services and systems including shopping services and catalogs which include AVI movies and WAV sound clips.

Workgroup projects

including conferences and project management are possible as are some absolutely stunning dating or match-maker programs. The mind boggles at the possibilities for interactive games which combine graphics, animation, video and sound.

"All of this creates some exciting opportunities," says Brinker. "Our goal is to create a platform that simplifies the integration of Visual Basic in a way that allows sysops to plug in any sort of content or abilities they want with complete freedom of application development. This new interface can allow the small sysop to truly compete, and in some cases surpass, large online services like Prodigy and America on Line.

"In some ways the small sysop has historically been able to provide better options than the large services. One reason is that the technology allows them to move much faster. Another is that sysops have always proven to be the most dynamic and creative entrepreneurs on the planet. Giving them the ability to add to and change their systems as they respond to their customers needs will certainly result in some startling new and innovative products and services," Brinker notes.

As of the writing of this article, Galacticomm was planning to ship the final release version of Worldgroup in March, 1995. "Disasters have been known to strike, but at this time, we are fully planning on holding to this release date. This is not vaporware, but a real product that is nearing a real release time," Brinker says.

The cost of the new package will be higher than the current version of The Major BBS. However, as noted by Brinker, more functionality will be built in. "The significant change is that the baseline package that used to be

\$259 list price, will now be \$795 but it will be bundled with the Advanced LAN Option that used to be a \$645 add-on product," he says.

Brinker adds that with the LAN option the product will be useful to many small businesses which "may want to use it as their internal e-mail and workgroups solution as well as their customer support and prospect sales type system."

Brinker expects the street price of the base Worldgroup package to be "under \$500." The price of the client program, which will be shareware, had not been determined at the time of this writing.

The exact number of lines that can be connected to a Worldgroup system is dependent on the hardware being used and the amount of memory available. "We currently expect that the number of lines supported by the intelligent kit under the current version of The Major BBS will be about the same for a Worldgroup system," Brinker says.

According to Galacticomm, "With the introduction of 90-MHz and 100-MHz Pentium machines and the Major BBS Intelligent Serial Kit, Galacticomm calculates support for a realistic 180 to 220 simultaneous users on the server at the equivalent of 19.2 Kbps and 140 to 170 users at 39.4 Kbps, and over 100 users at 57.6 Kbps connections. In addition, the perception of performance may be quite higher than it actually is, due to the multitasking capabilities of the Windows environment."

## CONCLUSIONS

Clearly, Worldgroup can raise the online arena to a new level and provide an exciting promise for the future. But, before we get carried away with the possibilities, we must remember that at this stage it is still a "promise."

I am impressed with Worldgroup. Even in this early stage, the program is very stable and, despite some minor flaws, has few bugs and problems that must be worked out.

However, this is pre-beta release software that I have examined. This means it has a long path to travel before a final version emerges. This is by no means a criticism. In fact, it is to Galacticomm's credit that they are undergoing such a complete testing program. The result could mean a more robust final release or a "back to the drawing board" approach.



Also, I had only a two user version for testing. I did notice some sluggishness when requesting files for upload or download on a remote connection. In all fairness, this could just be one of those "minor" flaws that will be resolved in the final version. Still, to get a real sense of its performance, I would have to see many more lines in operation at one time.

There is much that needs to be done before Worldgroup can truly take the lead in the online world. Principally, Galacticom will have to address the multi-platform issue. Yes, MS Windows is the most popular operating platform in use today, but it is not the only one and it does not mean that Windows will continue its dominance (remember when IBM ruled the PC market?).

I believe it is imperative that a Macintosh version of the client program be released at the earliest possible date. I know some don't like the Macintosh, but it is a system that is not going away anytime soon. The Mac userbase is vast. Most individuals and companies involved in graphics intensive work, including most major newspapers, magazines and printing houses, are Mac based. To exclude this seg-

ment of the computer industry seems to me to be a major mistake, from an economic point-of-view, if nothing else.

Galacticomm has had a very good record for delivering on its promises. I have few doubts that they will deliver again with Worldgroup. This is the most intelligent approach I have seen, so far, to building an online system that recognizes the past while addressing the needs of today and the promises of tomorrow.

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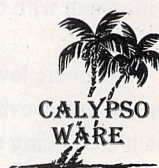
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| Your BEST Name Here                                 |                           |
| MICHAEL GIBBS                                       | Check No: 48329           |
| 110 EAST AVENIDA DALIZADA                           | Date <u>02/06/95</u>      |
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| <input type="checkbox"/> Custom Programming       | <input type="checkbox"/> ISDN Installation and Support |
| <input type="checkbox"/> Remote BBS Support       | <input type="checkbox"/> Internet Connectivity for BBS |
| <input type="checkbox"/> BBS "Service Bureau"     | <input type="checkbox"/> and Local Area Networks       |

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# INTERNETIC



## DR. BOB by Bob Rankin

### STUPID NET TRICKS?

This article is part four in a series on using e-mail to tap the wealth of the Internet. In previous issues, we've covered FTP, Archie, Gopher, Veronica, WAIS, WWW and a few other services.

In this installment we delve into the esoteric, the whimsical, and the downright practical in search of new ways to break down the barriers to full Internet access for the teeming hordes who have e-mail as their only link to the 'Net.

#### FINGER POINTING BY E-MAIL

Finger is a utility that returns information about another user. Usually it's just boring stuff like last logon, etc., but sometimes people put fun or useful information in their finger replies. Wanna finger somebody? Send e-mail

**To:** infobot@infomania.com

**Subject:** FINGER jtchern@headcrash.berkeley.edu

You'll receive some current sports standings. (If they're not ALL on strike by now...)

The general form is **FINGER user@site**, so next time you want to check out the validity of an e-mail address or find out if someone is logged on, give it a whirl. And just for kicks, try finger using a combination of gopher and WWW. Send the command:

**gopher://oddjob.uchicago.edu:79/0copi**

to **server@www0.cern.ch**, and you'll find out how many shopping days until Christmas, famous people born today, and other weird stuff.

Operator, Awudja Help Me Place This Call?

If the e-mail address you've got on that matchbook cover is faded, there are several Internet "white pages" that may be of help to you.

**WHOIS** is a service that queries a database of Internet names and addresses. If you're looking for someone or you want to know where a particular Internet host computer is located, send e-mail with

**Subject:** whois <name>

**To:** mailserv@internic.net

Try substituting **mit.edu** or the last name of someone you know in place of "<name>" and see what comes back!

Another alternative name looker-upper is a database at MIT which keeps tabs on everyone who has posted a message on Usenet. Send e-mail to **mail-server@rtfm.mit.edu** and include this command **ONLY** in the note body:

Bob Rankin, known as "Doctor Bob" in the online world, is a computer programmer and consultant who enjoys exploring the Internet and sharing the fruit of his experience with others. His free guide **"Accessing The Internet By E-Mail"** has circulated widely on the Internet, resulting in a daily flood of comments, questions & kudos by e-mail. Rankin has also authored **"100 Cool Things To Do On The Internet"** and **"Doctor Bob's Internet Business Guide"**, which are available for \$5.00 each. For more info, the author can be reached by e-mail at **BobRankin@Delphi.Com**

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ANONYMITY

• THE INTERNET  
ADAPTER -  
BRINGING THE  
WEB HOME

• NETBOY

• COOK REPORT  
TURBULENCE  
ON AND OFF  
THE INTERNET



**send usenet-addresses/<name>**

Specify as much information as you can about the person (lastname, firstname, userid, site, etc.) to limit the amount of information that is returned to you. Here's a sample query to find the address of someone you think may be at Harvard University:

**send usenet-addresses/Jane Doe Harvard**

**NETFIND** is another more powerful search engine that uses a person's name and keywords describing a physical location to return a bunch of information about the person (or persons) who fit the bill.

Let's say we want to find someone named Hardy at the University of Colorado in Boulder. Our Netfind query will be addressed to:

**server@www0.cern.ch**

and will contain the only line:

**gopher://ds.internic.net:4320/7netfind%20dblo  
okup?hardy+boulder+colorado**

Netfind works in two phases. First it displays a list of internet domains that match your keywords, then it looks for the person in the domain you select. Netfind by e-mail is very similar, in that you'll receive a listing of matching domains, from which you must make a selection (or several selections.)

Each selection is numbered and there are corresponding "**gopher://**" commands at the bottom of the listing. Let's pick the selection for

**cs.colorado.edu computer science dept, uni-  
versity of colorado, boulder**

which means that our next command to "**server@www0.cern.ch**" will be:

**gopher://ds.internic.net:4320/0netfind%20netfi  
nd%20hardy%20cs.colorado.edu**

If all goes well, you'll receive a list something like this:

**full\_name: HARDY, JOE (not a real person)  
email: CrazyJoe@Colorado.EDU  
phone: (303) 492-1234  
address: Campus Box 777  
department: COMPUTER SCIENCE**

Note that if you know the person's domain name already, you can jump in

with a query like the latter one above. "Usenet is a Dung Heap" So says my friend Patrick Townson, moderator of *Telecom Digest*. But nonetheless a couple hundred thousand people wallow in it every day. And even if your system doesn't carry a Usenet feed, you can keep tabs on your favorite newsgroups by e-mail.

Usenet is a collection of over 5000 discussion groups on every topic imaginable. If Usenet is a Great Unknown to you, avoid embarrassing yourself needlessly and read the Usenet new users intro document, which can be obtained by sending e-mail to:

**mail-server@rtfm.mit.edu**

Including this line in the body of the note:

**send usenet/news.answers/news-newusers-  
intro**

To get a listing of Usenet newsgroups, add these commands to your note:

**send usenet/news.answers/active-news-  
groups/ part1  
send usenet/news.answers/active-news-  
groups/ part2  
send usenet/news.answers/alt-hierarchies/  
part1  
send usenet/news.answers/alt-  
hierarchies/part2**

Once you've handled the preliminaries, you'll need to know how to read and contribute to Usenet newsgroups by e-mail. To obtain the full text of the recent postings to a newsgroup, send a command like this:

**deep news:comp.dcom.telecom**

to the CERN W3 server in Switzerland at the address

**server@www0.cern.ch**

If you have no interest in telephony, check out "**alt.alien.visitors**" or one of the other groups in the listings mentioned earlier.

Note: You might want to replace "**deep**" in the previous command with "**send**" to receive just a list of recent postings, from which you can retrieve individual postings that seem to be of interest.

Not every Usenet group is available from the CERN server. Don't expect to

find regional hierarchies such as **ny.\*** or the fee-based **clarl** groups on a public server in Switzerland!

**WAIT A MINUTE MR. POSTMAN...**

If you decide the world is worthy of your thoughts, you can contribute to a Usenet group by e-mail. Send the text of your post to:

**newsgroup.name.usenet@decwrl.dec.com  
(USA)  
newsgroup.name@news.demon.co.uk  
(UK)**

For example, to post to **news.newusers.questions**, you would send your message to one of:

**news.newusers.questions.usenet@decwrl.dec.  
com  
news.newusers.questions@news.demon.co.uk**

Be sure to include an appropriate Subject: line and include your real name and e-mail address at the close of your note.

**AN ALTERNATE USENET BY  
E-MAIL METHOD**

Another way to get Usenet postings by e-mail is via a special server in Belgium. It's a bit more flexible than the CERN approach, but it carries only a subset (about 1000) of the Usenet groups. Send e-mail to:

**listserv@cc1.kuleuven.ac.be**

with this command in the body of the note:

**/NNHELP**

and you'll get complete details. If you can't wait, send the command

**/NEWSGROUPS**

to get a list of the newsgroups available on the server. If you're even more impatient, try something like:

**/GROUP comp.unix.aix SINCE 19950317000000**

and you should get a list of postings made from 17 Mar 1995 onward.

**Mailing Lists**

There are literally thousands of discussion groups that stay in touch using e-mail based systems known as "mailing



lists". People interested in a topic subscribe to a list and then send and receive postings by e-mail. For a good introduction to Internet mailing lists, send e-mail to [LISTSERV@vm1.nodak.edu](mailto:LISTSERV@vm1.nodak.edu), and in the body of your note include only this command:

#### GET NEW-LIST WOUTERS

To search for mailing lists that are relevant to your interests, send the following command to the same address given above.

#### LIST GLOBAL /bananas

Replace "bananas" with a more appropriate search word if you like. Another helpful document which details the commands used to subscribe, unsubscribe and search mailing list archives can be had by sending to:

[LISTSERV@ubvm.cc.buffalo.edu](mailto:LISTSERV@ubvm.cc.buffalo.edu)

In the body of your note include only this command:

#### GET MAILSER CMD NETTRAIN F=MAIL

If you're new to the Internet, I suggest you subscribe to the HELP-NET list where you're likely to find answers to your questions. Send the command:

#### SUBSCRIBE HELP-NET Firstname Lastname

in the body of a note to [LISTSERV@VM.TEMPLE.EDU](mailto:LISTSERV@VM.TEMPLE.EDU), then e-mail your questions to the list address:

#### HELP-NET@VM.TEMPLE.EDU

All the other subscribers will receive your post by e-mail and if you're lucky some nice person will supply an answer.

(I'd like the "E-MAIL GOODIES" section set off in a two-column box with a colored background, like the one on page 74 of the January issue. The bio can go in the side bar at the beginning, as in the January issue.) ♦

## E-MAIL GOODIES

\* **WEBSTER BY E-MAIL** - Don't have your dictionary handy? Send e-mail to [infobot@infomania.com](mailto:infobot@infomania.com) again, but this time make the subject WEBSTER TEST and you'll get a definition of the word "test" in reply.

\* **WEATHER & THE SWEDISH CHEF** - Infomania offers a bunch of other services by e-mail. Almanac (daily updates), Weather, CD Music Catalog, etc. Send e-mail to [infobot@infomania.com](mailto:infobot@infomania.com) with Subject: HELP for full details.

\* **THE ELECTRONIC NEWSSTAND** - The Electronic Newsstand collects articles, editorials, and tables of contents from over 165 magazines and provides them to the Internet. To get instructions on e-mail access, send a message to [gophermail@enews.com](mailto:gophermail@enews.com).

\* **U.S. GOVERNMENT STUFF** - Find out if your congressman has an electronic address. Just send mail to [congress@hr.house.gov](mailto:congress@hr.house.gov) and you'll get a listing of congressional e-mail addresses.

For additional sources of US government info on the Internet, send e-mail to [mail-server@rtfm.mit.edu](mailto:mail-server@rtfm.mit.edu) with the commands:

```
send usenet/news.answers/us-govt-net-pointers/ part1
send usenet/news.answers/us-govt-net-pointers/ part2
```

You can also contact the President ([president@whitehouse.gov](mailto:president@whitehouse.gov)) or Vice President ([vice.president@whitehouse.gov](mailto:vice.president@whitehouse.gov)), but don't expect a reply by e-mail. Messages sent to these addresses get printed out and handled just like regular paper correspondence!

\* **USENET SEARCHES** - A new service at Stanford University makes it possible to search USENET newsgroups for postings that contain keywords of interest to you. You can even subscribe and receive a daily list of newsgroup postings that match your search criteria. Send mail to [netnews@db.stanford.edu](mailto:netnews@db.stanford.edu) with HELP in the body of note for full details.

\* **MOVIE INFO** - To learn how to get tons of info on movies, actors, directors, etc. Send mail to [movie@ibmpcug.co.uk](mailto:movie@ibmpcug.co.uk) with HELP in the body of note for details.

\* **STOCK MARKET REPORT** - Send e-mail with subject STOCK MARKET to [martin.wong@eng.sun.com](mailto:martin.wong@eng.sun.com) and you'll receive a rather lengthy stock market report (every day until you ask Martin to stop sending them)! Please note that this is not an automated server, so be sure to include a word of appreciation for this useful service.

\* **STOCK MARKET QUOTES** - If you want to get a current quote for just 1 or 2 stocks, you can use the QuoteCom service. They offer this free service along with other fee based services. For details, send e-mail to [services@quote.com](mailto:services@quote.com) with a Subject: HELP.

\* **ANONYMOUS E-MAIL** - The Finnish "Anon Server" provides a front for sending mail messages and posting to Usenet newsgroups anonymously, should the need ever arise. To get complete instructions, send e-mail to [help@anon.penet.fi](mailto:help@anon.penet.fi).

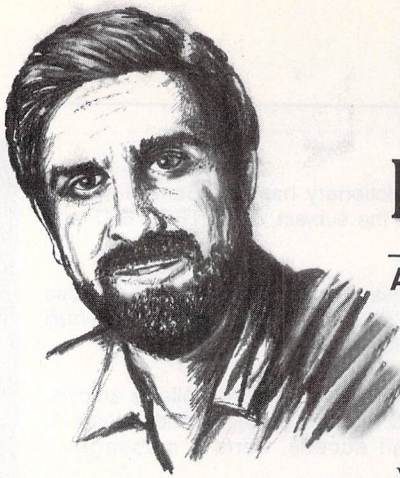
\* **NET JOURNALS LISTING** - I highly recommend "The Internet Press - A guide to electronic journals about the Internet". To get it, send e-mail with Subject: **send ipress to savetz@rahul.net**.

\* **THE SCOUT REPORT** - Scout Report is a weekly publication from Internic with interesting news about the Internet. Send e-mail to [majordomo@is.internic.net](mailto:majordomo@is.internic.net) with the line **Subscribe scout-report**.

\* **ASK DR. MATH** - Have a math question? No problem's too big or too small. Write to [dr.math@forum.swarthmore.edu](mailto:dr.math@forum.swarthmore.edu). All letters are answered by members of "The Swat Team" at Swarthmore College.

\* **THE INTERNET MALL** - This is a list of businesses large and small that hawk their wares in cyberspace. To get a copy send e-mail with Subject: **send mail to taylor@netcom.com**.





# net.imperative

by Harley Hahn and Wendy Murdock

## ANONYMITY

Harley Hahn is an internationally recognized author, consultant and analyst. His books include: *The Internet Complete Reference*, *A Student's Guide to Unix*, *The Internet Yellow Pages*, and *Unix Unbound*.

Wendy Murdock is an artist, writer, and Internet veteran specializing in creative art forms including BBSs and MUDs.

A reporter from the L.A. Times just called to see if we knew anything about a particular new Internet service. We asked, how did you get our number? He replied, I got it from a guy who runs an Internet company in Orange County.

Clearly, it's not easy to stay unknown these days (at least not when there are so many blabbermouths in Orange County).

The plain truth is that many people wish to remain anonymous: a state of being that is becoming more and more difficult to maintain. If you don't like all the junk mail that is sent to your home, wait until your e-mail address is sold and re-sold on commercial e-mail lists. Moreover, if you are attracted to those parts of the Net where people talk about things that nice people do not discuss (such as sex), just ask yourself what would happen to the wonderful variety of intellectual stimulation that characterizes these dark corners of the Net, if everyone's real name and address were appended to each Usenet posting and e-mail message.

Okay, most of the time you don't mind if someone knows your name and address when you mail a message or post a Usenet article. However, there are times when anonymity is crucial.

For example: A recent posting to the **alt.abuse.recovery** Usenet group was from a man who had sexually abused young girls, and who wanted to discuss his problem and related issues. You can argue back and forth as to whether or not such postings should be allowed. The point is, some people have a real need for anonymity when they participate in Usenet.

And you don't have to be a child molester to require privacy. Say that you work for Microsoft (or any other fine worldwide operating system company with predatory marketing habits) and you want to let people know that there are undisclosed bugs in the latest mission-critical, industrial-strength, enterprise-oriented product line. If you posted such information under your own name, it might go poorly for you at the office. Being able to send anonymous messages to the world at large allows you to blow the whistle and still keep your job.

Not convinced? OK, here is an everyday example that we are sure you can identify with. Imagine that you are the co-founder and Chairman of the Board of a large, worldwide operating system company with predatory marketing habits. You are of

marriageable age, but you are so shy that the only dates that you have ever had have been set up by your mother. And, you never really know if the women that you see like you for yourself or for your money.

So you decide to meet people by responding to personal ads on the Net - but you know that, as soon as a woman sees your real e-mail address, she will figure out who you are. To solve this problem, you can arrange to send and receive your e-mail anonymously and, only when the time is right, do you reveal your real identity.

In fact, one of our best friends - who happens to be a fabulously wealthy co-founder and Chairman of the Board of a large operating system company - was able to find his wife in just this manner. They met when he responded anonymously to a posting on the **alt.geek** newsgroup. Imagine his surprise when, after a long electronic courtship, he found out that he and she worked for the very same company (just like Jimmy Stewart in the movie "Little Shop Around the Corner").

The important point is that, in any group of people, there are those who, for whatever reason, will not speak up unless they can do so anonymously. In Real Life (tm), you can retain your privacy by unlisting your phone number and renting a post office box. In most cases, you will be safe from prying eyes (as long as you don't give the information to a blabbermouth from Orange County). But what do you do on the Net?

If you participate in any of the real time talk-oriented resources (such as IRC or a MUD), you will find that nicknames are the order of the day. By burying your real identity under a cool pseudonym, you can become the person that you always wanted to be without risking someone finding out the truth. On some systems, there is a way of finding out who a person really is but hardly anyone bothers because, when you come right down to it, who cares?

When you use a system where everyone has a nickname, anonymity is not so crucial because, after all, everyone is pretending at the same time. But when you start sending mail and posting to Usenet, you are entering a different world in which most people do use their real names. In such circles, there are times when the simple desire to retain a sense of human dignity requires anonymity.

For example, we have always been amazed at the men who will write to, say, **alt.pantyhose**, and describe in detail how they like to wear women's underwear and stockings under their clothes to



work, and then post the message from an Internet account that proudly displays their real name and the company they work for.

Although you may sneer at such people, we bet that if you were to be honest with yourself, there would be things that you would be glad to discuss with the world at large, if only you knew how to do so anonymously. So here is how it works.

The procedure is actually quite simple. All you need to do is send your message, along with the address of the person to whom you want the message to be sent, to a "remailer." This is a program that receives electronic mail and sends it back out to a different address. Along the way, the remailer strips out the entire header except for the Subject line. Thus, when the person receives your mail, he or she has no way of knowing where the original message came from.

Similarly, a remailer can also make anonymous postings to Usenet: instead of a person's address, you specify the name of a Usenet group. The remailer will strip out all of the information that identifies you and post the message anonymously.

There are a number of remailers around the Net, but we will discuss two of the more well-known ones: one in Finland and one in Berkeley.

The Finnish remailer - which is located on the machine named **anon.penet.fi** - is used by people all around the world, especially in those Usenet groups where discretion is often a necessity. The system works by assigning you an anonymous code name of the form "an" followed by a number. For example, your anonymous name might be "an007".

The remailer keeps a secret database of real addresses and code names. In the simplest case, someone who has your code name (say from a Usenet posting) can send you mail via Finland. For example, if your code name is an007, someone could send you mail by using the address: **an007@anon.penet.fi**

When such messages are received, the remailer looks up the code name in its secret database, and then forwards the mail to the real address. The person who sent the original message has no idea where it will ultimately end up.

Conversely, you can tell the remailer to send a message to a particular address.

The remailer will do so, but all that the recipient will see is that a message has arrived from a user named **an007**. When the person replies to your message, it will go to Finland, from where it will be relayed to you.

Indeed, it is possible (and common) for two people to carry on an anonymous electronic correspondence where each of them has their own code name, and all the mail passes through Finland. (Remember this the next time you are in geography class and the teacher asks what are the major imports and exports of Finland.)

Similarly, you can tell the remailer to send an article to a particular Usenet newsgroup. As you might expect, the remailer will strip away all the identifying information and then post the article anonymously. The return address will be your code name at the Finnish computer. That way, if anyone responds to your article by e-mail, it will be automatically sent to the remailer which will forward it on to you.

The Berkeley remailer — which resides on a machine named **soda.csua.berkeley.edu** - provides a similar functionality, but works somewhat differently. The Berkeley mailer is based on the work of a group of people called Cypherpunks who take secrecy seriously. In particular, they did not like the idea of a secret database that contains all the code names and real addresses. Instead, they devised a system in which no permanent information is kept by the remailer.

When you send the Berkeley remailer a message to be forwarded, it strips off all the identifying information, and then sends the message to the address (or Usenet group) that you specified. However, the remailer does not assign you a code name or keep any record of the transaction. Thus, your identity is more secure.

However, you might ask, how can someone respond to your message? The Berkeley remailer adds a special area called a "response block" to the end of your message. The response block contains your address but in an encoded form. If the person wants to respond to you, all he needs to do is put the response block at the top of his reply and mail it to Berkeley. The remailer will decode the response block, recover your address, and then forward the rest of the message to you.

(There is a disadvantage to this system, however. A person cannot send

mail to you unless he has a copy of your response block. With the Finnish remailer, you get a permanent code name that can be used at any time, like an anonymous post office box.)

The Berkeley remailer also has other security features. First, before forwarding a message, the remailer will wait a random amount of time. In other words, the mail does not go out in the order it arrives. This makes it more difficult for someone to connect a sender to a recipient by looking at the mail logs.

Second, for extra security, the remailer allows you to encode a message before you send it. When the message arrives, the remailer will decode it before forwarding it to the intended recipient. Similarly, there is a way to tell the remailer that you would like it to encode any messages that it sends to you. That way, if someone (say your system administrator) happens to be monitoring your mail, he will not be able to figure out what you are up to. True, he will see that you are sending and receiving mail from the Berkeley remailer, but the actual text of the messages will be encoded and safe from prying eyes.

Before you jump into the world of anonymous mailing and Usenet posting, there are a few short warnings that we would like to give you. First, do not put your name at the end of the message if you want to be anonymous. This is not as dumb as it sounds: many people have their mail programs set up to append a signature automatically to the end of each message before it is mailed.

Second, before you mail anyone an actual anonymous message, test the system by sending a message to yourself. This will allow you to ensure that everything works the way you think it should.

Finally, before you post an anonymous message to your favorite Usenet group, send a message to one of the test groups (such as **alt.test** or **misc.test**). Then, make sure that you can read your message and that everything looks the way you anticipated, before you send your first real anonymous posting. Hint: When you send a message to a test group, there are a number of computers around the world that will pick up the message and send you an automatic reply. If you wish to avoid this service, put the word "ignore" in the Subject line.



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# RESOURCES

For information about the Finnish remailer, send mail to:

[help@anon.penet.fi](mailto:help@anon.penet.fi)

It doesn't matter what you put in the Subject line or in the message. If you want the instructions in German, send a message to one of the following addresses:

[german@anon.penet.fi](mailto:german@anon.penet.fi)  
[deutsch@anon.penet.fi](mailto:deutsch@anon.penet.fi)

And if you want Italian instructions, you can mail to one of:

[italian@anon.penet.fi](mailto:italian@anon.penet.fi)  
[italiano@anon.penet.fi](mailto:italiano@anon.penet.fi)

For information about the Berkeley remailer, send mail to:

[remailer@soda.csua.berkeley.edu](mailto:remailer@soda.csua.berkeley.edu)

In the subject line, put:

**remailer-info**

It does not matter what you put in the body of the message.

Although we did not go into it, the Berkeley remailer uses a coding scheme called PGP (pretty good privacy) to encode messages. For information about PGP - which is widely used on the Net to encode regular mail - use anonymous ftp to connect to:

[net-dist.mit.edu](ftp://net-dist.mit.edu)

Then look in the directory:

**/pub/PGP**

for a file named:

**pgpdoc1.txt**

and start reading. There is a PGP FAQ (frequently asked question list) in the same directory, but it contains information for people who already know all about PGP. If you want a printed reference, O'Reilly and Associates publishes a book called "PGP: Pretty Good Privacy," by Simson Garfinkel. This book teaches you everything you need to know about PGP, and provides a wealth of interesting information about computer cryptography in general. The ISBN is 1-56592-098-8.

If you start to get serious about privacy, drop into the ongoing discussion on Usenet. For discussion relating to PGP, see:

**alt.security.pgp**

PGP uses a feature called "public keys." Once someone has your public key, they can encode a message that only you can decode. The newsgroup:

**alt.security.keydist**

is for people who want to announce their public keys to the world at large.

For a general discussion of secrecy, the government, and how THEY are out to get us, you can read the group:

**talk.politics.crypto**

If you are interested in the technical aspects of cryptography, check out the groups:

**sci.crypt**  
**sci.crypt.research**

Warning: These groups are only for serious hard-core cryptography nerds (and the second group is moderated).

For information about cryptography in general, you can get a FAQ via anonymous ftp. Connect to:

[rtfm.mit.edu](ftp://rtfm.mit.edu)

and look in the directory:

**/pub/usenet/news.answers/cryptography-faq**

The FAQ consists of a large number of files with the names part01, part02, part03 and so on. If you know nothing about cryptography, we suggest that you start with part03, which answers some basic questions.

If you are more interested in the underground aspects of secrecy, you can subscribe to the Cypherpunks mailing list. Send a message to:

[majordomo@toad.com](mailto:majordomo@toad.com)

In the body of the message put the single line:

**subscribe cypherpunks**

A Cypherpunk FAQ is available by anonymous ftp from:

[ftp.netcom.com](ftp://netcom.com)

Look in the directory:

**/pub/tc/tcmay**

And download the file named:

**CP-FAQ**

The file is huge and, at first, almost unreadable. If you would like to start off with something smaller, get the file named:

**MFAQ**

from the same directory. (The file name stands for "most frequently asked questions.") The **MFAQ** file is a subset of **CP-FAQ** and is full of all sorts of interesting stuff that you are not supposed to know (or even think about). ♦



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**Left to Right:**  
**Karyn German,**  
**Andrew Currie and**  
**Bryan Griffin**

## THE INTERNET ADAPTER - BRINGING THE WEB HOME

by Brian Gallagher

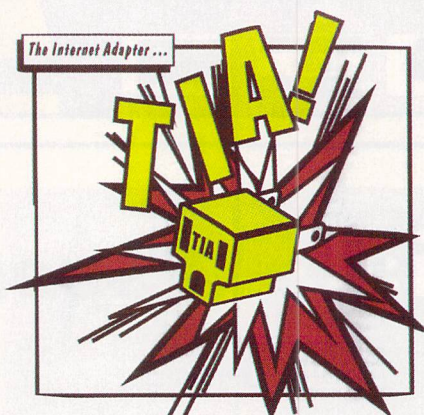
The World Wide Web has captured the imagination of the online community since the introduction of graphical web browser programs such as Mosaic and Netscape. But the cost of entry remains rather high. If you have a TCP/IP connection to the Internet from your office LAN, it is an extremely useful and enjoyable tool.

But if you don't, cruising the Web from home typically requires a dial-up SLIP or PPP account from an Internet Service Provider. SLIP accounts are increasingly available starting at \$25 or so per month. (See our list of SLIP/PPP providers on page 78.) But for those with a casual interest in the Web - that remains a substantial monthly fee.

Many Internet Service Providers also provide Unix shell accounts - a dial-up link to the service where you have your own home directory and a rather barren Unix command line interface. Typically it is provided as a basic e-mail and Usenet news facility and is often priced less expensively in the \$8 - \$20 range and almost always less expensive than a SLIP/PPP account.

Bryan Griffin and Andrew Currie have developed a software program allowing you to access the World Wide Web from one of these cheap Unix shell accounts. Their product, The Internet Adapter, or TIA, is uploaded to your host and run there by the Unix machine. It acts as a server that connects with normal WINSOCK SLIP/PPP software to simulate a SLIP account to your PC or Mac.

titled Cyberspace Development Inc., to further develop and market the program. We expected TIA to offer similar, but perhaps more sluggish performance to a regular SLIP/PPP account. But in a demonstration from their office in Boulder, they insisted it was really quite comparable in performance and we found the difference negligible.



The company is expecting to release a version of the software that will make it run faster still using C-SLIP (Compressed - Serial Line Internet Protocol) compression that Currie expects to enable TIA to "scream past any other option," for would be net surfers. A limitation of TIA is that surfing, i.e. the web, gopher, e-mail, Usenet newsgroups, and archie, is all users will be able to do - they will not be able to act as a server or do any routing specific services since TIA creates a "pseudo" SLIP account and not a *real* SLIP account.

Griffin, who is leaving Cyberspace Development to pursue other interests, wrote the relatively small program (approximately 200K) in C++ and C last year after getting tired of waiting

for someone else to write it because it was such an "obvious application," he was sure someone would. And the project turned out to be a bit more of a task than he initially envisioned but it was worth it and it doesn't put a heavy load on the server's CPU.

Carrying on the work at the company is Currie, who has a bachelor's in computer science and Karyn German who holds a masters in the same. Currie wrote the customer sales and support system for TIA and German works as the Operations Manager for the company. All told there are four full time employees working for TIA - everyone of which telecommutes from their respective homes in Boulder, Nederland, Denver and Seattle. There are also two employees who work as part-time contractors as well.

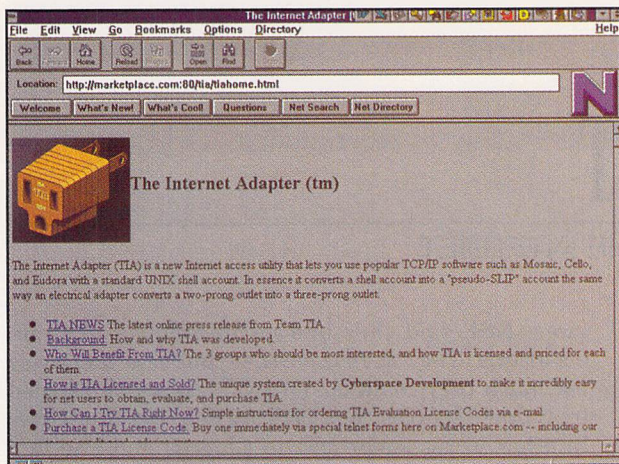
The marketing for the company is done by Intermind Corp. of Seattle Washington. Currie met Drummond Reed, President of Intermind at the 1993 ONE BBSCON in Colorado Springs where the first sparks of a business relationship were kindled between the two.

Currie and Griffin met in the mid 1980s while working on Artificial Intelligence projects for the aerospace giant Martin Marietta, where Griffin taught Currie the fundamentals of object oriented programming. Oddly enough, it is Griffin who never quite finished a computer science degree out of the trio, while attending Carnegie Mellon University in Pittsburgh to achieve just that end, he quit school and instead went to work for their computer science department - better to be paid than to pay.

For the future of this innovative piece of software look for PPP support, C-SLIP emulation and the licensing of already developed software allowing double click installation of TCP/IP stacks on the client machine. The installation of the stacks such as Netmanage or Trumpet Winsock is well known to be a tedious and sometimes hair-pulling experience which is why Cyberspace Development is working towards licensing the no-brainer installation. "What's the good of having easy to use software if it's not easy to install?" Griffin said.

Thanks to innovations such as this, for the price of a tank of gasoline - one can have the web in their home and stop lying awake at night worrying about being run over on the information highway. The only people who will be lying





**TIA Homepage** <http://marketplace.com:80/tia/tiahome.html>

awake at nights are the ISPs (Internet Service Providers) who will likely be flooded with a flurry of requests for shell accounts from those who want their web and want it now.

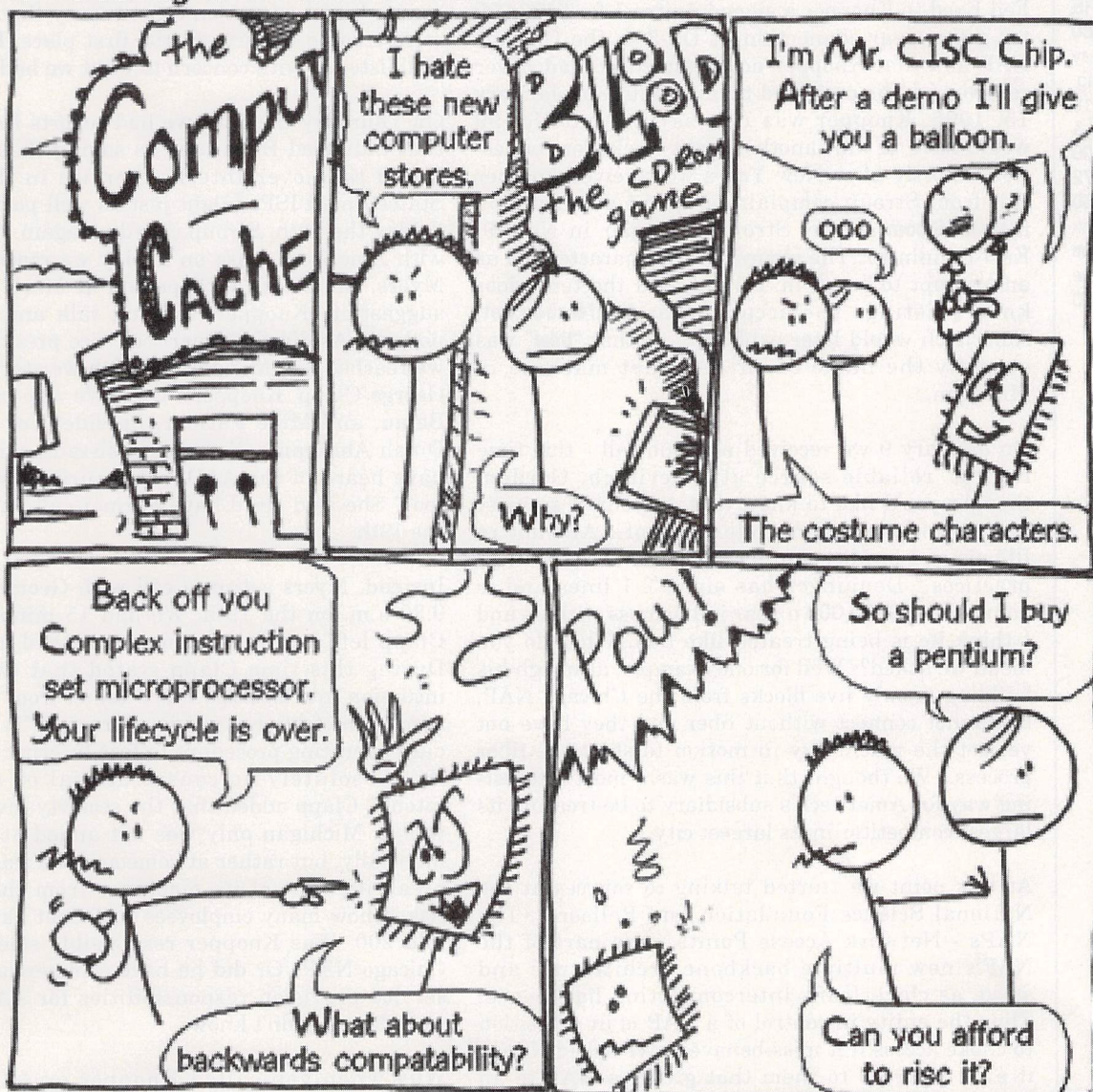
Information on TIA can be found on the net through listserve mailing lists and an FAQ providing a wealth of information and facts on TIA, installation of TCP/IP stacks, elementary information about the lingo of the Internet and most anything else

one could want or need to get going on the net. For a list of available TIA information send e-mail to: [tia-directory@marketplace.com](mailto:tia-directory@marketplace.com) or check out them out on the web at: <http://marketplace.com:80/tiahome.html> or through <http://marketplace.com/>.

The Internet Adapter, TIA Sales at Intermind Corp., 1101 North Northlake Way, STE 106, Seattle WA 98103; (206)545-7803 voice; [tia-licensing@marketplace.com](mailto:tia-licensing@marketplace.com) e-mail.

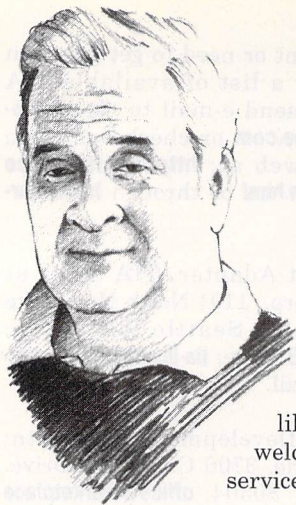
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# COOK REPORT

## TURBULENCE ON AND OFF THE INTERNET

**J**an 20, 1995 - Some signs exist that the big telcos and Microsoft would like to slam shut the wide open doors that welcomed resellers and their attached Internet service providers into the market in 1994.

### ROGUE AADSnet?

Ameritech has allowed its unregulated subsidiary Ameritech Advanced Data Services to behave in some very strange ways. On December 30, a very angry Joe Stroup called us to say that Net-99 had Fed Exed to Knopper a signed contract for **\$173,000** for a five year connection at DS-3 to the Chicago NAP and that Knopper now claimed he had never received it. The promised turn-on date was January 15, 1995. Knopper was now saying that Net-99 would have to wait another eight weeks for connection. Shortly after New Years we received another call from Stroup complaining about an incursion into **MCS.com** run by Stroup's partner in Net-99, Karl Denninger. The incursion was characterized as an attempt to break in. Stroup used the term door knob twisting. The account was **thief@aads.net**. Ameritech would later explain to us that "thief" was actually the name of an AADSnet machine in Michigan.

On January 9 we received a phone call - this time from a reliable source at Ameritech. Gordon: thought you'd like to know that Ameritech security has an investigation under way of AADSnet in Illinois and in Michigan for "non standard business practices." Denninger has eight T-1 lines and is doing about **\$300,000** a year in business with us and I think he is being treated like hell. What do you mean we asked? "Well for one example, although his building is only five blocks from the Chicago NAP, he cannot connect without fiber and they have not yet set the machinery in motion to start the fiber process." We thought that this was a most interesting way for Ameritech's subsidiary to be treating its largest competitor in its largest city.

At this point we started talking to sources at the National Science Foundation and Bellcore. (The NAPs - Network Access Points - are part of the NSF's new multiple backbone architecture and serve as cloverleaf's interconnecting backbones. Thus the entity in control of a NAP is in a position to choke access if it miss-behaves.) We asked NSF if it ever occurred to them that giving a NAP to an RBOC could create a conflict of interest for that RBOC, if the RBOC decided to roll out its own ser-

vices. NSF said they had never stopped to think about this. They were concerned, but said there was not much they could do. (Why? Because we learned from other sources that Bellcore zero bid the NAPs. In other words Ameritech in Chicago and Pac Bell in California were not charging the U.S. Government for the service. Bellcore was being paid for the time of one key executive to the tune of less than one million over the five year life of the cooperative agreement.) Not having payments to withhold, NSF could hardly afford to void the agreement because that would pull the rug out from under its research and education constituency that the NAPs were created to serve in the first place. Bellcore as well listened with concern to what we had to say.

On Thursday the 12th we had reports from Seattle that indicated Bill Gates as saying that Microsoft would take over Internet service in the United States Small ISPs might just as well pack it in. On Friday the 13th, Stroup called us again still furious with Ameritech. Also on Friday we reached Judith Myers, Ameritech's PR person at Mark Knopper's suggestion. Knopper wouldn't talk and she knew nothing. As did the Ameritech vice president whom we reached. On Monday the 16th we started calling George Clapp, Knopper's boss. We also called Mike Belau, and Mike Farmer, President of AADSnet. Dinah Abrahams, Farmer's assistant, said "oh, you have heard of the AADSnet security investigation too?" She said she'd have Farmer call on Thursday the 19th.

Instead, Myers set up a call with George Clapp at 9:30 a.m. on the 19th. We had 15 minutes before Clapp left in mid sentence to attend a meeting. During this time Clapp stated that the alleged incursion into **MCS.com** was a telnet from a machine named thief after a movie character. "It was standard operating procedure to test Internet connectivity. Absolutely no conspiratorial or malicious intent." Clapp added that the security investigation was in Michigan only was not aimed at AADSnet internally, but rather at someone who was trying to break into one of its machines from the outside. Asked how many employees AADSnet had we were told 200. Was Knopper responsible solely for the Chicago NAP? Or did he have commercial Internet service provision responsibilities for AADSnet as well? Myers didn't know.

Why when you called Knopper or AADSnet in Michigan did you get only voice mail? "Well Knopper's number has voice mail and I think that people do get called back," Clapp said. COOK

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Report: "And so you condemn people to play telephone tag from the very first call by never having people there who actually answer the phone?" Clapp said: I can't agree with that. I think that we do have people there answering the phone. There is a large volume. It's not an 800 number. COOK Report: "We guess you're not required to offer an 800 number." Clapp: "Well for inquiries about our Internet Services, I would direct the general public to our 1-800 Team Data number." COOK Report: "We are told that having regulated sales people sell for an unregulated subsidiary is not in compliance with MFJ." Clapp: "We don't agree. We are fully compliant. As far as Knopper goes, I think you understand that for busy people it is unusual to get them on the line very often. We think we are being responsive."

COOK Report: What is your response to Knopper's failure to act on the contract sent you on November 18, 1994? "We do know that we do have a signed contract with Net-99 - right now," chirped Myers. When did you get such a signed contract we asked. "It was directed to the wrong party within Ameritech and it wasn't forwarded to the right person," Clapp said. "We just discovered that we had it yesterday (January 18th). I think it was received on January 4."

What Ameritech was saying was in effect that they had "lost" Net-99's contract a **second time**! This was after Stroup had registered the strongest possible protests with Ameritech executives both on the 30th, and again immediately after New Year's day.

What about their request to get fiber laid to their building? When did that request first register? Clapp: "I was told that it came up a couple of months ago." COOK Report: "Doesn't that imply that they wanted a NAP connection a couple of months ago?" Clapp: "Well yeah, and we think that we - you know - Mark has been talking with Joe Stroup for some time. I think it's just - we don't start installing fiber until we get a signed contract." COOK Report: "It sure is strange that they could be talking fiber from the NAP to MCS and Mark never say to Stroup: well where's the signed contract? We never received it." When we asked Clapp for his e-mail address for further questions, Myers interjected with hers. And then abruptly Clapp was gone for his appointment.

Later, on January 19th, we called AADSnet. A recorded woman's voice answered Knopper's phone and says: "Mark Knopper is out of the office and will return on MONDAY December 12th." We suggest that when the date is January 19th, this is not a professional way to run a high profile cooperative agreement with Bellcore and the NSF. If they don't bother to change the recordings on their voice mail, it does become easier to see them misplacing a **\$173,000** NAP service contract FedExed to them November 18. Except that after all hell broke loose, they went and lost it again for another 15 days! We have been told that Ameritech expected no more than six to nine entities to connect at its NAP. Here comes one such client out of an anticipated universe of nine. And they can't track that client's interest in getting connected!?

Well let's go back to the Potemkin village of AADSnet offices in Michigan. The first voice had said that Mark's assistant Dinah Collins would take further inquiries at the second number. I called less than an hour ago. Voice answered: this is Dinah Collins, I am either away from my desk or on the phone, please call back or send e-mail. We guess Dinah works long hours (was about 7:12 p.m. when we called) and her good bye: "have a GREAT day" was verbatim, same tone, same inflection, SAME VOICE as the first unidentified voice that answered mark's personal line. Smoke and mirrors from Ameritech.

Someone posted the following to **comp-priv**: Ameritech's explanation of their service says: "The architecture of the Ameritech Internet Service allows AADS to carry IP (Internet Protocol) datagrams within a LATA. Traffic that exits the LATA destined for the greater Internet will be handed off to a Long Distance Internet Provider (LDIP), and AADS will give each customer a choice of these providers for their wide area Internet service. AADS will bill the customer for the intra- LATA service, and the customer should expect that the LDIP will charge an additional rate for access to the greater Internet."

And then asked: What the hell is a Long Distance Internet Provider? And who in the hell would sign up for a crazy service like this?

We replied: In answer to your question - you're right the long distance Internet service provider charge on top of Ameritech's from a market economic point of view makes no sense.

Except for one thing - the modified final judgment will likely soon be overturned. And with Ameritech unleashed to do local and cross LATA Internet service WITHOUT the extra cost layer. When that happens we predict two things:

You'll get a real human answering the phone at AADSnet which for Ameritech is now nothing more or less than a holding operation AND you will get an onslaught that will put most ISPs in Ameritech's serving area quite quickly out of business!

#### MCI ON ITS OWN POWER GRAB?

At the same time we have gotten direct statements from affected parties that MCI may **not** be allowing resale. A reseller in the northeast complained to us on January 20 that MCI had refused to sell him a T-1 to Internet MCI. He added: I had a long chat with my MCI technical rep this morning. Their dialup PPP service has been put off until 2/28. Word from the top is that they are not taking orders from the reseller community. The sales force is frustrated because a large portion of inquiries come from resellers. (That market, as expected, is exploding - my company is positioned to satisfy their needs, but only if our vendors cooperate.) The word is that MCI is developing "special reseller pricing" which will be announced in "Q1." Internally, our sales rep has been unable to get anything like a policy declaration; thus far he's only been able to get voice mail and e-mail. But he says Vint Cerf is definitely aware of the decision regarding resale.

Several days earlier we had a three-hour phone conversation with someone buying service for resale from a network that was getting its connectivity from MCI. That person complained that MCI had hit his provider with a 50 percent surcharge for resale.

Given this, the question becomes how many 19 hour days can Joe Stroup work in a row before one of the "big boys" comes to him and says here is a multi-million dollar check for control of Net-99? You look like you need a vaca-



tion Joe. And then the next day Net-99 no longer allows resale. Given those conditions how long will Sprint hold out? Without the right to resell and without affordable access to a NAP or a private interchange point like MAE - East, Microsoft and the ten largest telcos will have close to 100 percent of the Internet market by this time next year - if another Net-99 does not appear. And who at that point would risk the capital it would take to make a market impact? Why else are we so alarmed?

### INSIDE THE BELTWAY DEAL ON THE WAY?

As we write the republicans, having promised open government, are in closed door meetings in Washington with the CEOs of the telecommunications industry including cable, telco, broadcast and wireless. They are engaged, in stealth, in a massive rewrite of the 1934 Communications Act. Regulation will be eliminated - everywhere across the board. The Cable companies and the telcos will get into bed with each other and there will be one wire into every house.

Impossible you say. What about Public Utility Commissions in the states? States' rights? No problem. The bill to be done next week and passed on the fast track by February 15th will preempt states' rights across the board. There will be no control of telecommunications at the local level.

This scenario, in a posting, released to select Internet mail lists by Internet guru Dave Farber even had an elaborate explanation of the strategy planned to get the override of state authority through. Why the fast track? Well if it isn't passed by the 15 of February, too many people will become aware of what is about to be done to them and it will be stopped. In the meantime the republican cabal cuts its deals with industry moguls and lets it be known that any of the select staffers who are allowed in the door and who take notes without prior approval will be fired. And what about the democrats? Some of us did return democrats to congress as our representatives after all? Well they are locked out of the back room deal making and will be shortly presented with a fait accompli.

Signs are strong that at least some mega corporations and republicans are conspiring to capture for their own interests and suck dry - our revolution. Readers better get savvy and protest before they find out they have no longer the means to travel on the King's highways.

Gordon Cook, Editor & Publisher  
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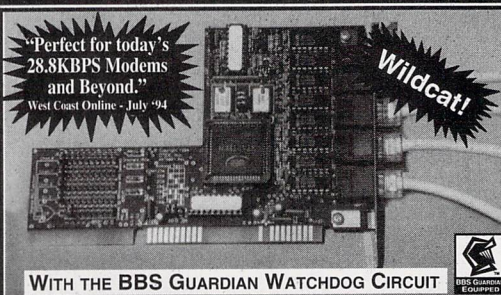
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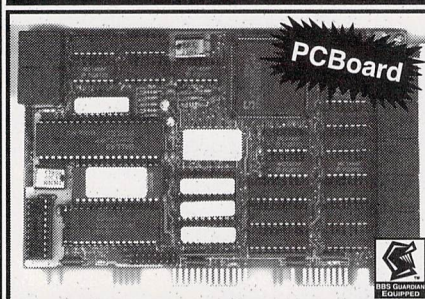


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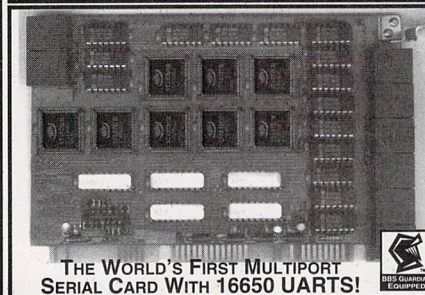


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(wcCODE add-on)

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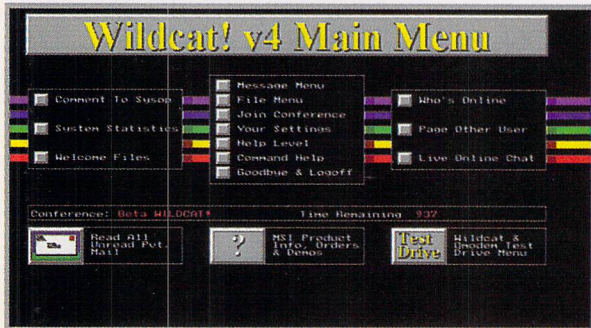
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There's a reason why more than 35,000 sysops worldwide run Wildcat! This powerful BBS software is packed with more performance features than any other product on the market. Today's

for over 32,000 message conference and file areas, and remote access to all BBS sysop functions. Wildcat! also features sysop-defined language files that let callers select the BBS interface of their choice, and a BBS display screen editor (wcDRAW) that allows the sysop to customize the look of the BBS interface.



sysops know they can count on Mustang Software to deliver a complete, feature-rich BBS solution at a real value. In fact, most of the features we include as standard are an extra cost in other products. So it's easy to understand why Wildcat! has been selected by more sysops than any other BBS package.

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"If you're looking to set up your own electronic bulletin board service (BBS), look no further than Mustang Software's new Wildcat! BBS Suite, version 4.0."

- Padraic Boyle, PC Magazine

"Mustang deserves credit for creating a superb successor to its already impressive BBS program."

- Russ Lockwood, Computer Shopper

"To meet demand for features that allow bulletin board systems (BBS) to be tailored individually, Mustang Software's developers rewrote Wildcat! BBS software from top to bottom."

- Sherrie Van Tyle, ElectronicDesign

"Planning to build your own bulletin board system? Mustang Software's major overhaul of its popular Wildcat! BBS software can help."

- PC World

Internet/MHS messaging gateway. wcCODE, a custom online development engine, helps the sysop to quickly develop custom applications or change Wildcat's operation. BASIC-like syntax combined with an Integrated Development Environment (IDE) make it easy to use more than 200 built-in functions.

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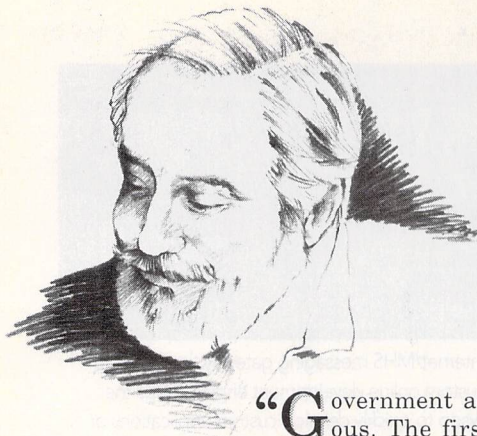
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# GOVERNMENT ACCESS by Jim Warren

ACCESS AROUND THE NATION, PLUS FEDERAL AID FOR  
COMPUTER "CRACKERS"

Jim Warren  
[345 Swett Rd.,  
Woodside CA  
94062; (415)851-  
7075; jwarren@well  
.com] received the  
first year Electronic  
Frontier Foundation  
Pioneer Award, and  
more recently the  
James Madison  
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Information Award  
from the Society of  
Professional  
Journalists  
Northern California  
for helping to make  
government infor-  
mation freely avail-  
able online. He is  
now pushing for  
similar access to  
campaign-finance  
disclosures. He  
founded *InfoWorld*  
and the Computers,  
Freedom & Privacy  
conferences, was  
founding host of  
PBS' television's  
"Computer  
Chronicles" and  
founding Editor of  
*Dr. Dobbs' Journal*,  
among other things.

"Government access" is intentionally ambiguous. The first part of this month's column concerns access channels by which citizens can access government officials and government information. The last part is a flame about arrogant access to citizens by government, and the well-proven, increasing dangers that it has created for *everyone* who uses an Internet computer, and every business that dares to use "The Information Superhighway" with its unjustifiable, government-mandated *insecurity*.

## CONGRESS ONLINE, SORT OF

The following information is thanks to the mind-numbing research and data-entry efforts of Grace York, Coordinator of the Documents Center at the University of Michigan Library in Ann Arbor <graceyor@umich.edu>

Congressional voice-numbers, fax-numbers (for those members who are willing to permit *non-contributor, non-lobbyist* "mere" tax-payers to know their tax-funded fax-numbers) and e-mail addresses such as they are can be gophered from: **gopher://una.hh.lib.umich.edu/0/socsci/polisci/law/uslegi/cone mail**

As of mid-January, public e-mail addresses were available for only ten of the nation's 100 Senators, and probably a minority of the 435 House seats (e.g., only seven of California's 52 House members had public net addresses).

There is a U.S. Senate gopher at **gopher:ftp.senate.gov/port 70**, and House gopher and Web sites at: **http://www.house.gov**, **http://thomas.loc.gov** and **gopher: gopher.house.gov/port 70** and Senator Ted Kennedy maintains an aggressive net presence, including his own Web-page at MIT: **http://www.ai.mit.edu/projects/ilip/Kennedy/homepage.html** Only three of Congress' numerous committees and subcommittees had a public net presence as of mid-January:

- House Education and Labor Subcommittee on Labor-Management Relations: **slabmgnt@hr.house.gov**
- House Resources Committee: **resource@hr.house.gov** and the
- House Science Committee: **housesst@hr.house.gov**

For Congressional voice-telephone numbers, call the Congressional information number, (202)224-3121.

## STATE & LOCAL TIDBITS

**California:** The State Senate has one of the best-reputed online public-information systems in the nation, providing ftp, gopher, WAIS and Web access to a massive range of Senate and legislative information.

Unfortunately however, as of late January, less than a dozen of the state's senators currently have public e-mail addresses, however you can find other information about *all* California State Senators by sending e-mail to: **finger@SEN.CA.GOV** with "Senator." in the Subject-line and no body-text in the message. Note the period after "Senator." The same information is available at: **http://www.sen.ca.gov/htbin/sen/ftp/sen/senator/**

[This according to Lee Panza, City Council Member, Brisbane CA <panza@tcomeng.com>]

**Massachusetts:** As sort of a state-wide civicnet for public access, MassNet <massnet@netage.com>, promoted as, "collaboration for the Commonwealth," was launched January 23, at The Boston Computer Museum. It is a non-profit organization, supported by more than 200 business, education, government, and community leaders including Congressman Ed Markey, who formerly chaired the House of Representative's Telecommunications Subcommittee.

A partial list of MassNet sponsors includes Arthur Andersen, CFM, Inc., Greater Boston Chamber of Commerce, The Computer Museum, CSC Index, EarthWeb, Inc., Interaction Associates, MIT Community Fellows Program, The Networking Institute, Oliver Wight/Omneo Publications, The Prosperity Collaborative, Steelcase Boston, US TeleCenters, and volunteers from the Boston Computer Society.

**Florida, tax rolls:** As what may be another net "first," Leon County, Florida has made its Property Appraiser's Rolls available on WWW at: **http://www.scri.fsu.edu/SCRI-user-forms/www-sql?leon-propappr94**

Home buyers and sellers, real estate professionals and fair-taxation advocates will probably find this



information invaluable. (Presumably, it does not contain any private or personal information that is not already a matter of available public record.) [This item provided by Hilbert Levitz, Computer Science Dept, Florida State University - Tallahassee <[levitz@cs.fsu.edu](mailto:levitz@cs.fsu.edu)>]

**Military surveillance by citizens:** Depending on how you compute it, U.S. military expenditures are between a quarter and half of the entire national budget. Hell, they're even greater than the budget of the Corporation for Public Broadcasting that sucked up huge amounts of high-profile, mass-publicity congressional time and attention in January and February. But the comparable minute details of the tax-paid military budget, and the exotic toys for the men and boys in and out of uniform, somehow receive much less national exposure.

Maybe the net can help fix that lack of public oversight.

"Neon Azimuth" is the code-name of an irregular online newsletter and project that Paul McGinnis created to provide information about "sources and methods" that citizens can use to find U.S. government and military documents. Sez he, "I realize the risk I am taking by publicizing this information, the U.S. government could decide to close off these sources. Why am I providing this information? The American taxpayers have a right to know where their money is being spent, and the 'sources and methods' given in Neon Azimuth can help locate secret U.S. military programs."

Apparently fee-free subscriptions to his *very* detailed online postings can be requested from him as [TRADER@cup.portal.com](mailto:TRADER@cup.portal.com) (he's also [PaulMcG@aol.com](mailto:PaulMcG@aol.com) and [76056.201@compuserve.com](mailto:76056.201@compuserve.com)), or in printed form by snailmail to Paul McGinnis, P.O. Box 28084, Santa Ana California 92799.

Files dealing with "excessive" military secrecy are available by anonymous ftp from [ftp.shell.portal.com](ftp://ftp.shell.portal.com) (IP address 156.151.3.4) in the `/pub/trader` directory. Read the `00readme` files for descriptions of the available information. Back-issues of Neon Azimuth are available from the same ftp site in: `/pub/trader/secrecy/neon-azimuth` The first issue was dated May 29, 1994; second issue was July 17; the third issue was January 16th of this year.

**Money and politics:** The National Voting Rights Institute (617-441-8200 <[votingrights@igc.apc.org](mailto:votingrights@igc.apc.org)>) founded in the spring of 1994 as a nonprofit organization says that they aim to eliminate wealth as a determinant factor in the electoral process, through some novel court cases around the country. Based on a new constitutional theory detailed in recent *Yale Law and Policy Review* and *Columbia Law Review* articles, the Institute has filed court challenges to the constitutionality of our campaign finance system. The aim of the litigation and accompanying publicity effort is to help move discussion about private money in politics, from its current focus on First Amendment rights of well-financed candidates and wealthy contributors, to issues of equal protection for rights of all candidates and voters under the Fourteenth Amendment.

As of our press deadline, the first court hearing was scheduled for January 27th before U.S. District Court Judge I. Leo Glasser, in Brooklyn, New York. A NYC Councilman and

1992 Congressional candidate, and others, are challenging the constitutionality of the campaign finance system.

**The first step in net-public-access:** (But you have to find someone on the net to use it.) There are three files maintained by the InterNIC at [is.internic.net](http://is.internic.net) (also available via <http://www.internic.net/infoguide.html>) that contain many pointers to U.S. Internet service providers:

**internic-us-provider-all [1]**

**internic-us-provider-leased [2]**

**pdial [3]**

[1] This document is maintained at <ftp://is.internic.net/infoguide/getting-connected/united-states/internic-us-provider-all> as a plain ASCII file and <http://www.internic.net/internic/provider.html>

[2] This document is available at <ftp://is.internic.net/infoguide/getting-connected/united-states/internic-us-provider-leased>

[3] This document is available at <ftp://is.internic.net/infoguide/getting-connected/united-states/pdial>

[This information kindly provided by Marcia Blake <[mblake@shore.net](mailto:mblake@shore.net)>]

**Military highway for the grunts:** SIHD is an open, moderated list for brainstorming, collaboration, and discussions about the new initiative within the U.S. Army known as the "Soldier Information Highway," intending to provide Internet access and training for all U.S. soldiers. Topics will include technical, legal, funding, training and other issues, including both local and centralized efforts. This is *not* the "Highway" itself, but is a forum about it. Also, SIHD will not address issues of military security or mission-oriented communications.

Send e-mail subscription-requests to [LISTSERV@WVNM.WVNET.EDU](mailto:LISTSERV@WVNM.WVNET.EDU) with **SUBSCRIBE SIHD Yourfirstname Yourlastname** in the *body* of the message, and including first and last names as indicated. List-owner: CPT Barry Hendricks <[U32B6@WVNM.BITNET](mailto:U32B6@WVNM.BITNET)> and James R. Schoening <[74237.1372@compuserve.com](mailto:74237.1372@compuserve.com)>

*The following are "government access" matters concerning the government's access to citizens that need continuous letters to the editors of general-circulation newspapers, calls to talkshow hosts throughout the nation, and virulent letters to our elected federal representatives. Beginning now, and continuing until there is adequate redress!*

## FBI AND NSA ENCOURAGE COMPUTER CRACKERS

The widespread Internet break-ins around December and January, and the accompanying thefts of many megabytes of files, including highly-sensitive information about network and communications security techniques, make it evermore evident the federal government in general, and the Federal Bureau of Investigation and National Security Agency in particular, are **actively aiding and encouraging computer crackers, phone phreaks, industrial spies and foreign intelligence-agents**, all in the name of "law enforcement" and "national security." [This perspective was kindly contributed by John Nagle, Menlo Park CA. The phrasing, however, is the author's.]



The FBI and NSA are zealously assisting crackers and spies by assuring that end-to-end communications-security is difficult and on-site file-security is discouraged. They are doing so by continuing their strenuous opposition to official adoption and widespread utilization of readily-available, globally-published, easily-used, *completely*-secure [public-key] encryption for *all* datacomm traffic and *all* stored files, even though it *could* be a standard and customary feature in all operating systems, personal and corporate computers, computer datacomm, and digitized telecomm such as ISDN and the new, limping digital cellular operations.

### ENCOURAGING CRACKER ACTS

The FBI's and NSA's opposition and resulting lack of adopted security standards, encourages computer and communications users to leave their networks and files inadequately-protected, making them enticing, easy targets for crackers' exploitation, whether their intent be mischievous, malicious or malevolent.

If there was almost-universal, global, end-to-end communications scrambling, and all files that could be accessed if a break-in *did* occur were securely-scrambled gibberish why would crackers bother?

The financial community and computer industry aren't about to adopt half-baked, "easily"-cracked "security" standards for global financial transactions, sensitive communications and protection of important files. Especially not if they are connected to the public computer nets that are increasingly-dangerous due to the lack of adequate security standards. And *most-especially* not when *provably*-secure, easily-utilized public-key crypto options are available throughout the world (but not exportable by the nation's software publishers and hardware manufacturers).

### GLOBAL COMPETITION? NAHHH!

Furthermore, U.S. operating-system designers, software publishers and datacomm providers are not going to standardize on the secure systems that *are* permitted so far *within* the nation, when half of their business and customers are outside of the nation. What's worse, U.S. companies are even prohibited from telling potential foreign customers which Eastern-Bloc companies can provide them with the secure crypto systems that would interface to U.S. software.

A strange approach to "global competition."

Are these bureaucrats thus-endangering all of us as a matter of their job-security, self-serving arrogance, or just plain myopic stupidity? Do they *really* think that computer-equipped criminals and national-security opponents won't use globally-available public-key crypto to protect *their* communications and files, simply because the government makes it difficult for *law-abiding* citizens and businesses to use it as a standard practice?

It's time for *responsible* decisions by federal officials. They must *encourage*, not discourage, adoption and export of standardized, *maximally*-secure communications and file-protection tools. Even if it makes it more difficult for the successors to J. Edgar Hoover and CIA-spy Aldridge Ames to peep and snoop.

### WATERGATE MEMORIAL SYSTEM

This is a footnote to my January column detailing the legislation that now forces public phone companies to implement the United States' new Federal Wiretap System, and pays them a half-billion tax-dollars to get started.

To recap, for those who missed that last exciting episode: The system is for the convenience and use of all authorized local, state and federal Executive-branch clerks and officials, under the direction and control of incumbent politicians and senior bureaucrats who are beholden to them.

It will also be used by those many political and bureaucratic insiders, great and small, who behave like the 1,300 Internal Revenue Service employees who were investigated for making unauthorized use of their authorized access to sensitive personal files, reported by the IRS in 1993 Congressional hearings. And it is being eagerly awaited by every kid, industrial spy and political spook who wants to crack this newest addition to the massive public-telephone complex.

But its predictable insecurity, lack of public information about its potential authorized uses ("they're classified") and monumental waste, there are less than a thousand *authorized* wiretaps reported, annually, are not its biggest problem. The greatest danger from this incumbents' spying system is its ***lack of adequate (easy-to-implement) checks and balances, no oversight independent of the wiretap system's users.*** The same branch of government empowered to *use* the system is the only branch that is expected to police its use.

The legislation that mandated and funded this wiretap system, HR 4922, was authored by liberal Democrats Patrick Leahy (D-VT) and Don Edwards (D-CA). Congress passed it in less than two months, with almost-no public hearings.

Now to the minor point of this footnote: HR 4922 was introduced on August 8, 1994, the exact 20th anniversary of the day President Richard Nixon resigned under threat of impeachment, after his senior aides attempted to bug the Democratic National Headquarters in Washington's Watergate office complex, and Nixon attempted to use his position to cover-up their illegal, covert, political-surveillance efforts. Nixon must be rolling in his grave, realizing how much difference 20 years-or-so could have made in his personal power, his career, the careers of his dethroned aides, and the entire history of this nation.

Last year's incumbent politicians and bureaucrats apparently learned from Nixon's mistakes.

### PERSONAL NOTE: EUDORA'S WONDERFUL!

I typically receive 60 to 120 e-mail messages or more, per day. Until late December, I accessed them via dial-up to the WELL (the Whole Earth 'Lectronic Link, Sausalito CA, <support@well.sf.ca.us>), painfully slogging through the monumental message morass using Unix's antiquated e-mail from my otherwise-potent, high-end desktop Mac. Talk about frustrating!

Well, it finally got so bad, and I got so behind, that I finally bit the bullet and took the time to install a freeware version



that I'd had for almost a year, of Steve Dormer's Eudora for the Mac, an automatic mail-sweeper and offline desktop e-mail-handler (by dialup or direct net-access; PC versions also available). I had heard good things about it, but, *Wow!* What a difference.

I was so delighted with what the free-ware version offered that I promptly got the very lowcost, enhanced commercial version and access to its toll-free support lines from Qualcomm (San Diego, (800)238-3672, <eudora-sales@qualcomm.com>). It has *vastly* improved my productivity. *Highly* recommended.

Hot dang! It's amazin' what ya kin do with these hyar computer-thangies, once ya git 'em runnin' rite. ♦



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Rea Andrew Redd lives and works in southwestern Pennsylvania where he manages a high school library, teaches European history and Scholastic Achievement Test preparation. On occasion, he reenacts American Civil War battles with the Ninth Pennsylvania Reserves, an historic, military impression unit. E-mail Rea at: [red@genesis.duq.edu](mailto:red@genesis.duq.edu)

A guy named Carl can be many things. And this particular Carl is many things: a public access catalog, current indexes, databases and thousand upon thousands of searchable articles that can be ordered with a credit card and sent directly to your fax machine. The Colorado Alliance of Research Libraries (CARL) offers access to 1.) library catalogs including government publications, 2.) current article indexes including UnCover and ERIC 3.) information databases, including encyclopedias, 4.) other library systems and 5.) library and system news. Let's telnet to: [pac.carl.org](http://pac.carl.org)

How about a visit to 20 libraries? Take your pick: Geology? Visit the Colorado School of Mines. Medicine? Try the University of Colorado Health Science Center or MedConnect. Education? Browse at the State Department of Education. Film and Video? Peruse the University of Colorado Film/Video Library holdings. Law? Denver University's Law Library is open 24 hours a day.

Hey! It's flu season; let's try medicine! Medconnect? Sure. Hmm? We could visit the the University of Colorado Health Science Center, The Association of Operating Room Nurses, the Denver Medical Library, the National Jewish Center for Immunology and Respiratory Medicine, or six different hospitals. Let's go to a general facility; at the University of Colorado Health Science Center we can browse by title, call number, or series, and search by name or word. Knowing that all of this is at my fingertips, I feel better already. Off to the databases!

Here we have Choice Book Reviews, and an encyclopedia, the School Model Programs, the Internet Resource Guide, Journal Graphics (television and radio scripts, mostly of Public Broadcast Service (PBS) oriented items), the Federal Domestic Assistance Catalog, and the Librarian's Yellow Pages. Of course we'll look first in the Colorado Department of Education's School Model Program's database. With federal money provided through Project LEAD (Leadership in Educational Administration Development) the database provides access to information about educational programs in Colorado that foster improvements in school administration and teaching.

We can find the 1990-1991 winner of Colorado's Technology Education Award, Jefferson County's Erie School District; the winner was a grades seven through twelve curricula that includes everything

from wind and solar energy to robotics, satellite technology and pneumatic structure transportation systems. Appropriate contact sources are listed. Let's join Littleton High School in "Rethinking the American School." Performance-based grades, and graduation based upon student demonstrations of knowing and doing, (as opposed to credit-based graduation) is on their agenda. They began in 1991 with their freshman class; personalized and individualized education focusing on small group and cooperative education is the goal of this endeavor. The teachers at Eaglecrest School in Aurora Colorado hope that their seventh and eight graders will "Be HIP; Hot Into Politics." HIP is a social studies-driven interdisciplinary unit that includes three components: the selection of membership in a political party and campaigning for a candidate, the visitation of community leaders to the school, and registration and voting in a mock election. The descriptions and objectives and the contact personnel for these three, and a wide variety of many other programs, is in the School Model database on CARL. Needless to say, if you need to write a grant proposal, you would do well to search this database for ideas that have already been successfully developed, funded, and implemented.

This site also offers thousands upon thousands of searchable articles through the UnCover service. You can order documents from it by using a credit card and a fax number. For this service Telnet to: [database.carl.org](http://database.carl.org) Like I said, it's a one-stop shop for your research party supplies.

## MARVELLING AT OUR TAX DOLLARS: A QUICK VISIT TO THE LIBRARY OF CONGRESS

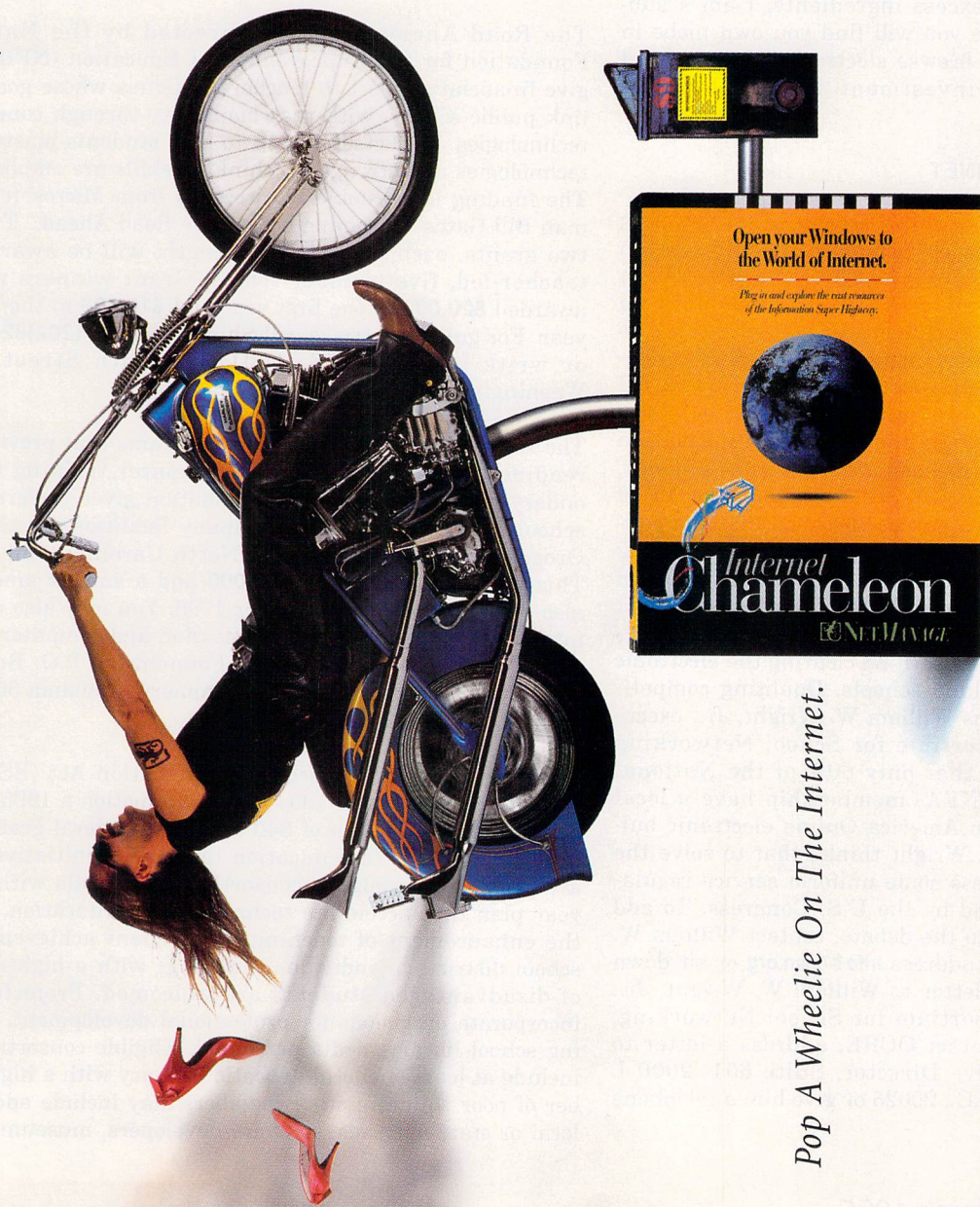
From Colorado, we travel to Washington, D.C. electronically; telnet to: [marvel.loc.gov](http://marvel.loc.gov) login: [marvel](http://marvel.loc.gov) There we find the Library of Congress (LC) and a menu with 13 items; in particular, we are interested in research and reference (public) services, libraries and publishers (technical services), Library of Congress (LC) Online Systems, the Global Electronic Library (by subject), and Internet Resources.

Let's visit the Global Electronic Library (GEL); 15 subjects from which to choose. The list is attractive: library science, philosophy and religion, language and literature, the arts, the social sciences, law, economics and business, history and geography, medicine and psychology, natural science, mathematics, applied science and technology, sports and recreation. I'm confessing to you readers; with the wealth



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of information before me I am going to pick history and geography. Open the LC Marvel treasure chest and pick your own jewels.

With the history and geography menu I have 18 selections on the screen. Wonderful things like: history and geography journals, guides to history and geography resources on the Internet, the Case Western Reserve University FREENET, futurology and cyberculture and genealogy resources as well as 13 other subjects in this marvelous (yes, it is a pun) database. Well, a quickie then; history and geography journals has a menu of five selections, including Histnews, the Electronic History Newsletter, and the HISTNEWS archives, CLIONET from Australia, history journals from CICNET, and history and philosophy of science and technology.

HISTNEWS began in the autumn of 1993 as an online news and information source for faculty, scholars and graduate students. The massive **HISTORY@PSUVM** is condensed by HISTNEWS and furthermore, offers a two-way communication in a digest form, twice-a-week - Mondays and Thursdays. Each issue has a table of contents and most articles are edited down to one screen. As a volunteer effort, HISTNEWS is well done, timely and not over-baked with jargon, inside jokes, and excess ingredients. I am a subscriber now. And I am sure you will find your own niche in the Library of Congress to browse electronically. Go ahead and use your tax dollar investment at the Library of Congress.

#### FARMERS AND THE INTERNET

Bringing Internet access to farm belt schools is in the works; the Organizations Concerned About Rural Education (OCRE), a consortium of 25 groups sponsored a panel at an autumn 1994 Congressional Rural Caucus held in Washington, D.C. entitled "Ensuring Universal Service to Rural Schools in a Competitive Environment." Cable, telephone, and wireless companies were approached by OCRE with the question, "How do we provide affordable access to rural schools that want to use the National Information Infrastructure (NII)?" At the caucus - Internet pioneer, founding member of the Internet Society, and senior VP of MCI, Inc., Vinton G. Cerf expressed the hope that competition among providers will provide the answers. Employing new wireless communication technology, new methods of electrical service by utilities, and new Internet tools that require less bandwidth, less powerful equipment, and therefore less money. Cerf sees competition clearing the electronic path to the nation's farmland schools. Doubting competition's success in this area is William W. Wright, Jr., executive director of the Consortium for School Networking (CoSN). Citing that fact that only 60% of the National Education Association's (NEA) membership have a local access number to reach an America Online electronic bulletin board, **NEA ONLINE**, Wright thinks that to solve the problems of universal access some uniform service regulation needs to be considered by the U.S. Congress. To add your electronic two cents to the debate, contact William W. Wright with e-mail at the address [info@cosn.org](mailto:info@cosn.org) or sit down and write an old fashion letter to William W. Wright, Jr., Executive Director, Consortium for School Networking, Washington, D. C. To contact OCRE, address a letter to Charles Conrad, Executive Director, Suite 601, 2000 L Street NW, Washington, D.C., 20026 or give him a telephone call at (202)223-6304.

#### SATELLITES AND EDUCATION

West Chester University (Pennsylvania) is sponsoring the Pennsylvania Department of Education's annual "Satellites and Education" conference this month, 21st-23rd, at the university. This year's theme focuses upon "The Information Superhighway Today in Education." Successful classroom applications for various disciplines, spanning elementary through doctoral curriculum will be presented; innovative uses of satellite data and various advanced technologies will be demonstrated. Call Nancy McIntyre of West Chester University, located 50 miles west of Philadelphia, at (610)436-2393.

#### GOT A GOOD IDEA? DOES IT WORK? THERE MAY BE MONEY IN IT!

The application process for money to be dispensed in 1996 by the National Information Infrastructure (NII) is now open. The NII Awards recognize the innovative and effective use of information networks in the areas of education, community service, business, health care, and government. Contact Access Media with e-mail to [sriley@ata.com](mailto:sriley@ata.com) or voice call them at (310)450-7941 extension 21.

The Road Ahead program, directed by the National Foundation for the Improvement of Education (NFIE) will give financial support to teacher-led teams whose goal is to link public schools with the community through connective technologies. Projects designed to help students master new technologies and strengthen thinking skills are emphasized. The funding is available by proceeds from Microsoft chairman Bill Gates' Upcoming book, "The Road Ahead." Twenty-two grants, each two years in length, will be awarded to teacher-led, five member teams. Grant winners will be awarded **\$20,000** in the first year and **\$10,000** in the second year. For guidelines voice call Shirley Nelson, (202)822-7844 or write her at NFIE, 1201 Sixteenth Street, NW, Washington, D.C., 20016.

The Blount Foundation supports programs that provide job-readiness, learning skills and computer training to secondary school students. The foundation gives preference to schools in areas where its company facilities are present: Oregon, Wisconsin, Alabama, North Carolina, and Idaho. This year's awards total **\$100,000** and a similar amount is also expected to be budgeted for 1996. You may also be interested in the elementary education and computer literacy awards. Contact the Blount Foundation, P.O. Box 949, 4520 Executive Park Drive, Montgomery, Alabama 36192 or voice call at (205)244-4348.

The Elementary and Secondary Education Act (ESEA) of 1994, voted into law in 1994 will set in motion a 1995 appropriation of a minimum of **\$40 million** in federal grants and incentive awards for education technology initiatives that are promoted through a consortium. Proposals with a five year plan that accelerate technology into education, and/or the enhancement of teaching and student achievement in school districts or individual buildings with a high number of disadvantaged students are welcomed. Projects must incorporate provisions for professional development, including school library media personnel. Eligible consortia must include at least one local education agency with a high number of poor children; other members may include additional local or state agencies, software developers, museums, busi-

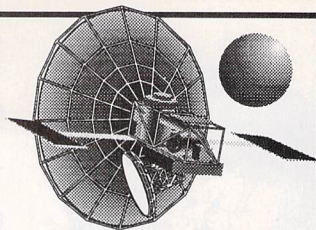


nesses, libraries or institutes of higher education. Other ESEA grant initiatives include \$7 million for "Ready To Learn Television" educational programming for very young viewers; the "Star Schools Program" will allocate \$35 million to develop and distribute distance learning across multi-state regions. For more information on ESEA technology funds voice call Julie Kaminko, (202)401-1444.

North Carolina set aside its 1994 state budget surplus and put it in an interest bearing account as the state's local education districts prepared long-range technology plans. The \$42 million trust fund was released in February to those districts with technology plans in place with the North Carolina Department of Public Instruction. The accepted plans include a way to provide schools with connectivity to the information highway; each local agency can use up to 10% of allocated funds for technology planning and another 20% to 30% for staff development. North Carolina teachers should contact their building principal for the initial funds, which are now available in their district. ♦

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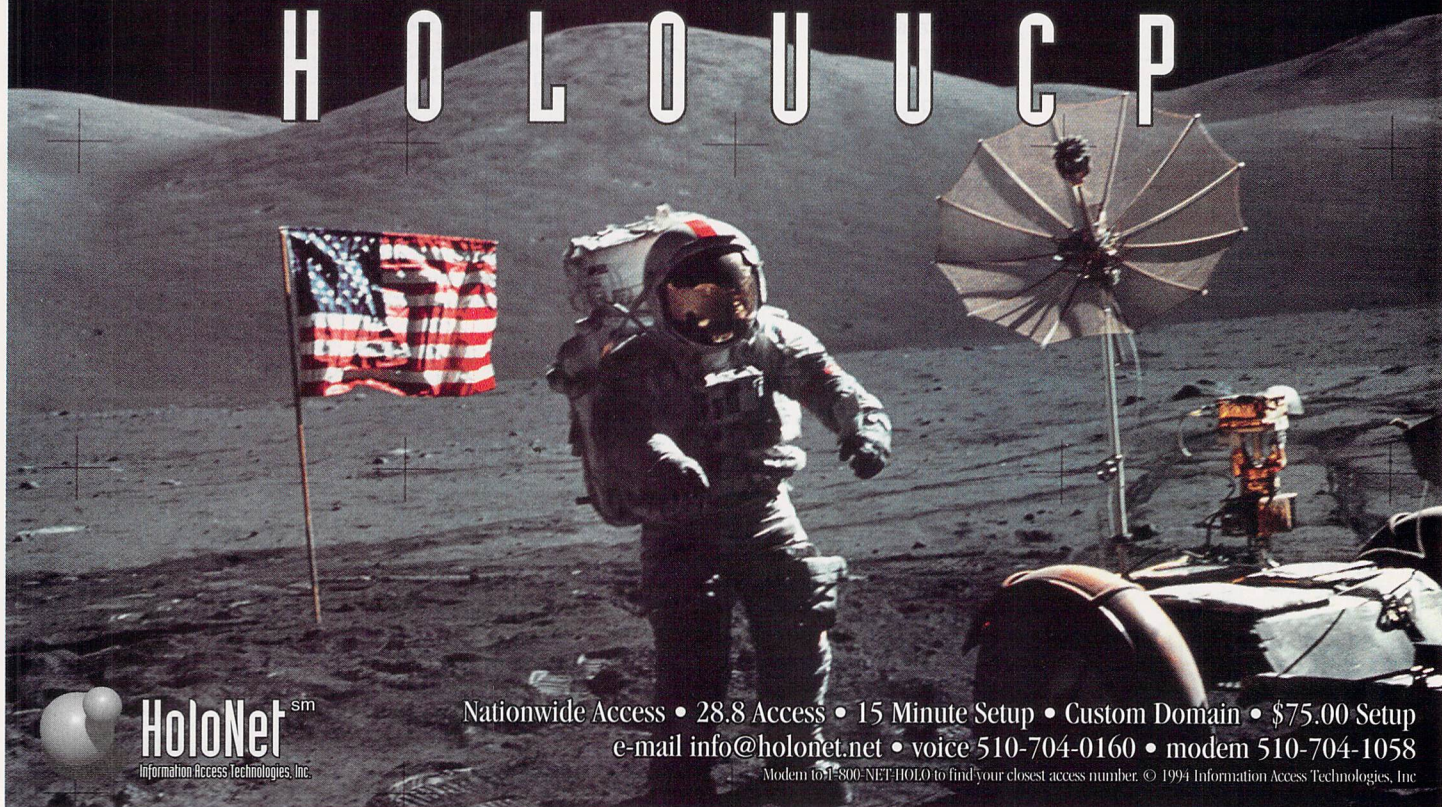
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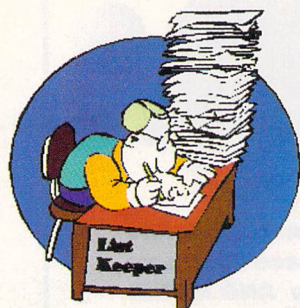
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# BOARDWATCH

## List of BBS List Keepers

This listing comprises a list of those who compile and maintain lists of bulletin boards, either by topical category, or by some geographic area or definition - often by area code. The primary bulletin board system where the list can be downloaded electronically is also included.

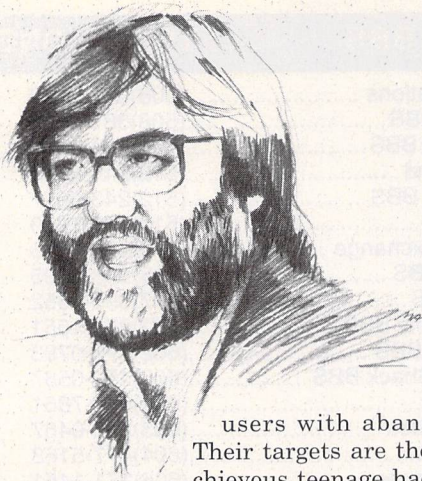


| BBSLIST TOPIC                        | AUTHOR/EDITOR                   | CONTACT BBS                | TELEPHONE     |
|--------------------------------------|---------------------------------|----------------------------|---------------|
| New Jersey BBS's.....                | Scott Drake .....               | T.E.R.N. BBS .....         | (201)399-4772 |
| Connecticut AC 203 .....             | Kevin Brook .....               | Creative Edge BBS .....    | (203)743-4044 |
| BBS With Handicapped Focus .....     | Bill McGarry .....              | Handicap News BBS .....    | (203)926-6168 |
| Known Networks .....                 | Victor Laking .....             | Generic BBS .....          | (204)475-5199 |
| Manitoba, Canada List AC 204 .....   | Victor Laking .....             | Generic BBS .....          | (204)475-5199 |
| Seattle AC 206/West Washington ..... | Bob Dinse/Nanook .....          | Eskimo North .....         | (206)367-3837 |
| Tacoma Washington AC 206 .....       | Richard Langsford .....         | AmoCat BBS .....           | (206)566-1155 |
| Puget Sound Area .....               | Art Tomlin .....                | Orion Station .....        | (206)675-0565 |
| Kitsap County Washington .....       | Michael Schuyler .....          | Quicksilver BBS .....      | (206)780-2011 |
| Maine 207 .....                      | Scott R. Bodeen .....           | Street Corner BBS .....    | (207)442-0997 |
| Modesto, CA BBS List .....           | Chris Mitchell, "Gomba" .....   | Anything Goes .....        | (209)491-0782 |
| Central California AC 209 .....      | Jack Porter/Madera UG .....     | Zen Den Systems .....      | (209)675-8436 |
| San Antonio TX (AC 210) BBS .....    | Donna Murrell .....             | Main Complex BBS .....     | (210)658-8009 |
| Graphical User Interface BBS .....   | David Shapiro .....             | The Gooey (GUI) BBS .....  | (212)876-5885 |
| 96 List - 9600+bps BBS .....         | Ken Sukimoto .....              | Downtown BBS .....         | (213)484-0260 |
| Employment BBS's .....               | George Smith .....              | Executive Connection ..... | (214)306-3393 |
| Dallas/Ft. Worth BBS List .....      | Mark Elson/Mike Shockley .....  | Blues Cafe .....           | (214)638-1181 |
| Open Access UNIX Site List .....     | Phil Eschallier .....           | LGNP1 (login:BBS) .....    | (215)348-9727 |
| Cleveland Area 216 .....             | Jim Barry .....                 | Flip Flop .....            | (216)951-9134 |
| Educational BBSS .....               | Joe McIntosh .....              | KSI Public BBS .....       | (219)626-2150 |
| Educational and Indiana BBS .....    | Joe McIntosh .....              | KSI Public BBS .....       | (219)626-2150 |
| Conservation/Nature BBS List .....   | D.Wendling/JS Christianso ..... | Coin of the Realm .....    | (301)585-6697 |
| Ham/Amateur Radio BBS .....          | Stan Staten .....               | 3WINKs BBS .....           | (301)590-9629 |
| Handicapped Issues BBS .....         | Richard Barth .....             | HEX BBS .....              | (301)593-7357 |
| Desktop Publishing BBS .....         | Frank Atlee .....               | Infinite Perspective ..... | (301)924-0398 |
| Delaware AC 302 .....                | Vince Boehm/Dave Osburn .....   | Talk Radio BBS .....       | (302)429-7667 |
| Colorado AC 303/719 .....            | Willis Morrow .....             | Big Boy's BBS .....        | (303)458-3832 |
| Cave Exploration BBSS .....          | Douglas L. Moore II .....       | The CatEye BBS .....       | (304)592-3390 |
| South Florida Area 305/407 .....     | Eric Thav .....                 | Silicon Beach BBS .....    | (305)474-6512 |
| Southern California .....            | Mike Hefferman .....            | SOCAL Corner .....         | (310)422-7942 |
| California AC 310 .....              | Jim Walton .....                | Illusions BBS .....        | (310)804-3324 |
| Detroit Area 313 .....               | Horst Mann .....                | Tony's Corner .....        | (313)754-1131 |
| St. Louis AC 314 .....               | Beth Brooks .....               | Fire Escape's Dir .....    | (314)741-9505 |
| ASP BBS Member List .....            | Richard Holler .....            | The RoadHouse BBS .....    | (317)784-2147 |
| Engineering Related BBS .....        | Arthur Petrzalka .....          | Computer Plumber .....     | (319)337-6723 |
| Rhode Island Area 401 .....          | Mike Labbe .....                | Eagle's Nest .....         | (401)732-5292 |
| Alberta AC 403 .....                 | Stephen Decarie .....           | T-8000 .....               | (403)246-4487 |
| Calgary Alberta AC 403 .....         | Jeremy Birkett .....            | The Quantum BBS .....      | (403)252-5119 |
| Atlanta Area 404 .....               | Online Atlanta Society .....    | OASIS .....                | (404)627-2662 |
| Atlanta Area 404 .....               | Rodney Aloia .....              | The INDEX System .....     | (404)924-8472 |
| Montana Area .....                   | Jay Michalik .....              | Valley Light BBS .....     | (406)273-6399 |
| Searchlight BBS Systems .....        | Chad Payne .....                | Montana MediaNet .....     | (406)549-6325 |
| Orlando BBS List AC 407 .....        | Lenny Lacuy .....               | Infinite Space Onlin ..... | (407)856-0021 |
| San Francisco Bay Area .....         | Mark Shapiro .....              | BABBA BBS .....            | (408)946-8592 |
| Baltimore BBS Area 410 .....         | David Fogle .....               | Silver Streak BBS .....    | (410)254-3400 |
| Pittsburgh AC 412 .....              | Chas Stokes .....               | Zuul's Catacombs .....     | (412)264-9787 |
| National BBS List .....              | DP McIntire/Beth Spotts .....   | Ameriboard .....           | (412)349-6862 |
| Miwaukee Area 414 .....              | Mark G. .....                   | The Castle .....           | (414)327-5085 |
| North America Nudist List .....      | Patrick O'Brien .....           | Natural Connection .....   | (414)426-2110 |
| Toledo Ohio Area 419/313 .....       | Ryck Zarick .....               | Toledo's TBBS .....        | (419)475-2241 |
| Arkansas Area 501 .....              | Bob Underdown .....             | The Blue & The Grey .....  | (501)444-8420 |
| Louisville KY and South IN .....     | Tim Arnold .....                | Dance of Shiva BBS .....   | (502)893-6360 |
| Portland Oregon BBS .....            | Lisa Gronke .....               | DawGone Disgusted .....    | (503)297-9145 |
| New Orleans AC 504 .....             | Darin Celino .....              | Southern Belle BBS .....   | (504)455-9488 |
| New Mexico Area Code (505) .....     | Dan Kiehl .....                 | MDC Computers BBS .....    | (505)434-0258 |



| BBSLIST TOPIC                       | AUTHOR/EDITOR               | CONTACT BBS               | TELEPHONE     |
|-------------------------------------|-----------------------------|---------------------------|---------------|
| Apogee/ID/Software Crtns List.....  | Dan Linton.....             | Software Creations.....   | (508)368-7139 |
| PCBoards on Internet.....           | Ruben Melo.....             | ponyXpress BBS.....       | (508)587-7669 |
| Worcester MA AC (508).....          | Jim Metzler.....            | Miwok Village BBS.....    | (508)754-6512 |
| Corpus Christi.....                 | James Cordani.....          | Treasure Island.....      | (512)241-8358 |
| Austin Area BBS List AC 512.....    | John Foster.....            | Camel's Back BBS.....     | (512)243-0077 |
| Selected BBS.....                   | Joseph Caplinger & Son..... | J&J's BBS.....            | (513)236-1229 |
| AC 516 Free Shareware BBS.....      | Harold Stein.....           | Long Island Exchange..... | (516)271-5303 |
| 516 AC, 800 numbers, Freenets.....  | Wilton Virgo.....           | Long Island BBS.....      | (516)338-8595 |
| Area Code 517 - Mid-Michigan.....   | Rick Rosinski/SAMM.....     | Wolverine BBS.....        | (517)695-9952 |
| Phoenix AC (602).....               | John Mendivil.....          | Majestic Royalty BBS..... | (602)278-1651 |
| Phoenix AC (602).....               | Sue Widemark.....           | Cheese Whiz BBS.....      | (602)279-0793 |
| Cochise County Arizona.....         | Kevin McCrory.....          | The Commo Shack BBS.....  | (602)452-0587 |
| Arizona and Southwest U.S.....      | Michael.....                | BBSouthWest.....          | (602)820-7861 |
| New Hampshire BBS's.....            | Mike Maggi.....             | Marios Birdhouse.....     | (603)226-0467 |
| Victoria/Vancouver AC 604.....      | Mark Morley.....            | Island Net.....           | (604)477-5163 |
| Kentucky AC (606).....              | Jon Hagee.....              | Kentucky Explorer.....    | (606)271-1451 |
| Wisconsin 608.....                  | Jim Wargula.....            | JW-PC Dataflex.HST.....   | (608)837-1923 |
| New Jersey AC 609.....              | Dave Schubert.....          | The Casino BBS.....       | (609)485-2380 |
| Real Estate Boards.....             | Ted Kraiss.....             | Dealmakers Online.....    | (609)587-4651 |
| New Jersey Area 201/609/908.....    | Wayne R. Morton.....        | Praedo BBS.....           | (609)953-0769 |
| Medical Issues BBS.....             | Edward Del Grosso.....      | Black Bag.....            | (610)454-7396 |
| Job Search and Inet hot list.....   | Ward Christman.....         | Online Opportunities..... | (610)873-7170 |
| Minnesota Twin Cities AC 612.....   | Barry Watson.....           | Abiogenetic BBS.....      | (612)774-8454 |
| Apple II BBS.....                   | Mike Shecket.....           | Way Out.....              | (614)436-4846 |
| Tennessee AC 615/901.....           | unknown.....                | SPDA Info Service.....    | (615)952-5638 |
| Business/Professional BBS.....      | Dennis Hauser.....          | Delight The Customer..... | (616)662-0393 |
| Female Sysops.....                  | Brenda Donovan.....         | The Pacific Rim.....      | (619)278-7361 |
| San Diego, CA AC 619.....           | Tom Grigg.....              | ComputerEdge.....         | (619)573-1675 |
| San Diego AC 619.....               | Joe Nicholson.....          | General Alarm.....        | (619)669-0385 |
| Apple II BBS with Internet con..... | Morgan Davis.....           | pro-sol.....              | (619)670-5379 |
| Virginia AC 703/804.....            | Eddie Gebhard.....          | PC Power House.....       | (703)348-1423 |
| OS/2 BBS Systems.....               | Pete Norloff.....           | OS2/Shareware BBS.....    | (703)385-4325 |
| Genealogy Related BBS.....          | Richard A. Pence.....       | NGS-CIG.....              | (703)528-2612 |
| Charlotte, NC AC 704.....           | Blaine Schmidt.....         | Moobasi Optics, Ink.....  | (704)541-9842 |
| Indigenous People BBSs.....         | Arthur McGee.....           | BDPA BAC BBS.....         | (707)552-3314 |
| Black Run/Oriented BBS.....         | Arthur "Rambo" McGee.....   | BDPA BAC BBS.....         | (707)552-3314 |
| Chicago.....                        | Peter Anvin.....            | Royal Swedish Viking..... | (708)491-9036 |
| Gay & Lesbian BBS List.....         | Billy Kennedy.....          | Risqilly BBS.....         | (708)495-6609 |
| Airline Pilot/JUMPSEAT BBSs.....    | Rex Chadwell.....           | ChicAAgo Hangar.....      | (708)980-1613 |
| Houston Area 713.....               | David E. Wachenschwanz..... | Atomic Cafe BBS.....      | (713)530-8875 |
| Korean BBSs.....                    | Wayne Jeong.....            | Korea America Online..... | (714)449-9373 |
| Area Code 715 BBS's.....            | Corey Koltz.....            | YES It's another BBS..... | (715)345-7132 |
| Rochester NY AC 716.....            | Tracy Logan.....            | Logan's Run.....          | (716)328-2914 |
| RIP BBS Listing.....                | Mario Mueller.....          | Antarctica BBS.....       | (717)755-2440 |
| 717 AC BBS Listing.....             | Adam Viener.....            | Cyberia.....              | (717)840-1444 |
| Vermont BBS's.....                  | Russ Boyce.....             | Computer Ser. of Ver..... | (802)334-7976 |
| Ecology/Conservation BBS.....       | Bob Chapman.....            | EarthArt BBS.....         | (803)552-4389 |
| Central California Area 805.....    | Larry Honore.....           | His Board.....            | (805)652-1478 |
| Wildcat! BBS.....                   | Jim Harrer.....             | Wildcat! HQ.....          | (805)873-2400 |
| Oahu Hawaii.....                    | Brent Davis.....            | Land's End BBS.....       | (808)499-2527 |
| Technical Support BBS List.....     | Gary Barr.....              | Digicom BBS.....          | (812)479-1310 |
| Pinellas/Tampa Florida AC 813.....  | Emery Mandel.....           | Mercury Opus.....         | (813)321-0734 |
| Kansas City Area 816/913.....       | Bob Zumbunnen.....          | PC-HELP BBS.....          | (816)331-4703 |
| Dalls Fort Worth BBS List.....      | Mark Robbins.....           | Second Sanctum.....       | (817)467-1175 |
| Occult BBS.....                     | Phil Hansford.....          | Mysteria.....             | (818)353-8891 |
| Commodore 64/128/Amiga BBS.....     | John Rigali.....            | Night Gallery.....        | (818)448-8529 |
| Texarkana BBS List.....             | Rodney Payne.....           | Internet Connection.....  | (903)793-7173 |
| Internet accessible BBS's.....      | Richard S. Mark.....        | Dragon Keep.....          | (904)374-3500 |
| Durham Region-Ontario Canada.....   | Chuck Cirvec.....           | Odyssey Systems.....      | (905)579-9241 |
| Alaska AC 907.....                  | Patti Johnson.....          | Alaska Pirate Soc.....    | (907)248-9364 |
| Travel Related BBSs.....            | Robert Southwick.....       | AK Information Cache..... | (907)373-3205 |
| Kansas 913 Area Code BBS's.....     | Chuck Baslock.....          | On-Line Connection.....   | (913)587-0241 |
| Darwin National USBBS List.....     | Bob Breedlove.....          | Bob's BBS.....            | (916)929-7511 |
| OS/2 Related BBS.....               | Dave Fisher.....            | LiveNet 1:170/110.....    | (918)481-5715 |
| Tulsa Oklahoma Area BBS List.....   | Linda Hargraves.....        | ACCESS AMERICA.....       | (918)747-2542 |
| Raleigh NC Area Code 919.....       | Mike Stroud.....            | Micro Message Svc.....    | (919)779-6674 |
| National ISDN BBS list.....         | Ken Morrison.....           | Digital Velocity BBS..... | (919)992-3059 |
| Republic of South Africa.....       | Henk Wolsink.....           | Catalyst BBS.....         | 27-41-51-3406 |
| Switzerland BBS List.....           | Cesar Keller.....           | The Warehouse BBS.....    | 41-1-492-5157 |





# LEGALLY ONLINE

by Lance Rose

## HOW TO RAID A BBS - FEDERAL SEARCH AND SEIZURE GUIDELINES

Government agents have raided BBSs and net users with abandon over the past few years. Their targets are the usual net suspects, from mischievous teenage hackers to morally depraved porn merchants. By the time the dust clears, though, it seems that too often the real victims are those who were raided, and that the cops have caused more damage than anyone else.

Examples are littered all around. There's the famous Steve Jackson Games case, where federal agents violated both the company's rights as a publisher and users' e-mail rights when they ripped a customer support BBS out of company offices, then casually perused through it back at the lab for months afterwards. The seizure of the Alcor BBS, returned to its owners only when users threatened a massive e-mail privacy invasion suit against the government. The televised bust of Tony Davis in Oklahoma City, including an on-air broadcast of a computer monitor showing BBS users privately downloading files.

Reports of such raids often reveal government actions that could not conceivably pass legal muster. Every BBS taken by the cops (unless it disallows private e-mail) is loaded with private e-mail from many users, *each of whom has privacy rights against the government (under the Electronic Communications Privacy Act, or ECPA). Unless government agents have a warrant naming each e-mail user of the target system, their seizure and retention of the system likely violates privacy rights. And indeed, none of the warrants that have come to light so far even acknowledges the comprehensive listing of e-mail users that would be necessary to make the overall system seizure legal.*

Similarly, more and more Net users are publishing on the Net. The case can be made that everyone posting to a publicly available bulletin board area, whether on a BBS or Usenet or a large service like Prodigy, is "publishing" online sufficiently to invoke the special anti-search and seizure laws applicable to publishers and journalists (known as the Privacy Protection Act, or PPA). Or consider just the tens of thousands of people and businesses busily putting up Web pages every month. They are all electronic publishers, in every possible sense of the word. Yet the prospect of a BBS being involved in publishing operations does not seem to have deterred any raids. It does not even seem to enter the minds of the agents who draft and procure the warrants.

That is exactly the question: *what is on the minds of the agents who seize these systems? What are the officials and government lawyers who direct the raids thinking? Concerned citizens on the net divide largely into two camps: (1) those who believe government agents are well-meaning but just don't understand how civil rights work online, and (2) those who believe that the agents know pretty well how online civil rights work, but just don't give a damn about them when it comes time to catch a crook.*

Those in the first camp have faith that the answer to bad BBS raids is education. Help the cops understand the online world. Show them that when there is trouble, the problem is usually not the BBS or online system itself, but an isolated user or two on the system. Seizing the whole BBS penalizes the innocent sysop for the crimes of those who misuse the system, and it penalizes innocent users who have nothing to do with the troublemakers. Proponents of cop education hold meetings with their local government agents, break bread with them, and attempt to help them appreciate online culture and the laws that properly apply to that culture.

A recently revealed government document now suggests that this notion - educating the cops will end bad BBS raids - is hopelessly naive. The document is titled "Federal Guidelines for Searching and Seizing Computers" (we'll call it the "Guidelines,") and was made public through the efforts of a Washington, D.C. group called EPIC (the Electronic Privacy Information Center), using the Freedom of Information Act. The Guidelines were created by the U.S. Department of Justice, aided by a team of federal and state computer crime agents spread across a number of agencies, including the FBI, DEA, IRS, Secret Service, U.S. Customs, the Air Force and the Bureau of Alcohol, Tobacco and Firearms. They were completed in June, 1994, and became publicly available at the end of the year. They can be found by FTP, gopher, WAIS or listserv at [/cpsr/privacy/epic/fed/\\_computer-seizure\\_guidelines.txt](ftp://cpsr/privacy/epic/fed/_computer-seizure_guidelines.txt) at [cpsr.org](http://cpsr.org)

The Guidelines were created to provide guidance to agents who are not specialists in high-technology searches, and to harmonize the search and seizure procedures of different federal and state agencies. Though ostensibly an "educational" document, the Guidelines are actually part of a Justice Department agenda to clear the way for computer searches and seizures with minimal interference from civil rights laws and protections.

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Constitutional and other federal limits on unreasonable searches and seizures are all mentioned, to be sure. But instead of explaining the reasons for those limits or showing them a modicum of respect, the Guidelines provide agents with lots of helpful hints on exploiting loopholes and exceptions to our civil rights protections. If this sounds like a silly little game, the end result can be pretty alarming - a cadre of federal and state agents fully educated to ignore your civil rights when they come to subject you or your system to a search or seizure.

The anti-civil rights bias in the Guidelines is thorough going, and often fairly subtle. It first surfaces, naturally enough, in the introduction. The Guidelines inform government agents that computer searches are just like every other kind of search by the government: just apply common sense and the same rules applied to other kinds of searches, and your computer search will be perfectly legal. This, of course, is almost entirely wrong. Searching a computer used for a BBS or other online communications is *nothing at all like searching a car or a house. As mentioned above, a computer involved in online communications will often be covered by the ECPA, the PPA or both: laws enacted by Congress for the express purpose of limiting searches and seizures far more sharply than the limits dictated by the general provisions of the Constitution. Any agent who thinks the rules for a BBS raid are like raiding a drug dealer's apartment is almost certain to get it wrong, and violate someone's civil rights in the process.*

The first subject explored at length in the Guidelines is warrantless searches. Agents often prefer to avoid the hassle of getting a warrant when they can get away with it. The Guidelines point out some examples of warrantless, though perfectly legal, searches that may come as a surprise to those who believe their private spaces are inviolate.

One broad category is searches performed pursuant to "third party consent." Anyone with whom the computer owner shares space, such as family members, apartment mates or the landlord, may have the authority to consent to a search of the computer, backup tapes, etc. when the computer owner is not there. In cases of doubt, agents who reasonably believed the person giving consent to search the absentee owner's computer had the power to give that consent might be given the benefit of the doubt, and the search will stand, even if in fact that person had no power to give consent. How can the computer or system owner avoid these situations? Protecting everything with a password, and not giving the password to others with whom you live, will go far towards heading off a warrantless search in these situations.

Another interesting arena for warrantless searches is employee e-mail on workplace LANs and other networks. One of the great shortfalls of the ECPA is that it does not protect the privacy of electronic messages on systems typically found in the workplace. This leaves workers to rely on their Constitutional "expectation of privacy" for e-mail accounts as the main legal deterrent against government snooping. This might be okay, except that the Guidelines inform us that as far as our Department of Justice is concerned, employees' expectations of privacy for their e-mail may in fact be overblown and unreasonable; after all, LAN administrators may be able to look through employees' e-mail without even telling them. In such situations, the Guidelines advise agents that they may well be able to perform unannounced, warrantless searches on employee e-

mail. Both employers and employees may be interested in deterring this practice, since matters discovered by government agents in employee e-mail could involve the employer as easily as the employee. The easiest way to do so is to take the hint provided by the Guidelines themselves: employers should consider giving their employees snoop-free accounts, which then cannot be searched by government agents without a warrant.

The other major area for warrantless searches is government use of informants and undercover agents. Government agents can legally search anything to which they are given access by the host or owner without a warrant, and they can lie to the host to gain that access. This applies as readily to the inside of a private BBS or e-mail list as it does to a mobster or drug dealer hideout. Those clinging to the myth that a bulletin at the threshold of a BBS announcing "police and undercover agents must keep out," will have any legal effect had better wake up. Undercover cops were born to infiltrate, and if you harbor anything interesting to them, they will do their best to infiltrate you. To avoid infiltration, online sysops and users must adopt security and identity verification procedures sufficiently strong for the level of privacy they desire.

## SYSTEM SEARCHES AND SEIZURES

The Guidelines cheerfully tell us on page 62 that "There is ample authority to justify removing computer systems (or the relevant parts of them) to a field office or laboratory in order to search them for information." The main "authority" looks more like a couple of limp excuses for taking the system. One is that agents might mistakenly destroy data if they perform the search on-site, so it is better to perform the search in the controlled environment of the lab; the other is that wily computer owners might rig booby traps to destroy data if the search is not performed back at the lab by experts. An interesting sidelight is that the Guidelines state elsewhere that when system equipment is fairly unique, it is legal to seize it, because otherwise it would be very difficult for the cops to search the system using the standard off-the-shelf equipment available to them. Put them together, and what do we get? Agents can seize system equipment any time they think the data on the system is booby-trapped; and to make sure they can actually read the data in the lab, they can seize the rest of the equipment just in case any of it is unique. These excuses and loopholes reveal the Department of Justice's real attitude about system searches and seizures: the government can take your computer system away from you at any time, and for the flimsiest of reasons.

Similarly, the Guidelines provide agents with some convenient excuses, in case it turns out their computer raid was illegal despite the plethora of loopholes. For instance, agents who act according to a warrant issued by a judge, even if it's an illegal warrant, can take legal refuge in the fact that they merely did what the warrant said. This would make sense if the warrant is entirely worded and originated by a judge, and the agents robotically do what they are told. In reality, judges often rubber-stamp the warrants prepared by agents and prosecutors, pausing only to see if the agents have a half-credible story to back up the search the warrant describes. So agents can prepare a warrant skirting or crossing the borders of illegality, persuade a judge to sign off on it, and later claim they only did what the judge told them.



Another excuse offered up by the Guidelines: if agents "reasonably believe" they are not violating any laws regulating their conduct, even though in fact they are performing an illegal raid, they can make a strong case to stay out of trouble. In an astonishing twist, the Guidelines support this approach by citing the case where Steve Jackson Games successfully sued the government for an illegal BBS raid. The judge in that case held that when government agents first seized the BBS, they did not know that private user e-mail and publishing materials were involved, so the initial seizure was not illegal. It only became illegal when they retained the system after learning about the privacy rights a day or two later. The Guidelines seize upon this ignorance-based excuse, and suggest that other agents should consider the option of claiming that they, too, had no idea they were violating privacy rights when they performed an illegal raid. Too bad - some of us were hoping that after being informed about the Steve Jackson Games case, government agents would respect its command to observe limits on searches and seizures, instead of rummaging around for yet more loopholes to defend illegal raids in the future.

What about equipment and data that are legally seized? Can you ever get it back? The Guidelines point out that when federal agents perform a lawful seizure, there is a heavy burden on those who would seek return of the materials under federal laws covering the return of seized property. They do urge agents to consider giving back copies of legal materials contained on seized disks and computers to the owner, while retaining the originals.

At the same time, however, the Guidelines point out that if any of the seized data or files infringe copyrights, then government agents can't give them back; infringing materials do not belong to the person from whom they were taken. This copyright infringement loophole is one of the more powerful tools agents can use to hold onto seized equipment and data virtually forever, since many computers contain at least a few programs or files that technically infringe copyrights. Once an agent finds even one copyright infringement in a seized system, the government can hang onto the entire system for months without good justification, on the pretext that they have to really scour the system to make sure there are no other infringing materials on it.

The question of returning seized equipment is especially sensitive when agents seize a system, not because the owner or sysop did anything wrong, but because the system was used by others in connection with a suspected crime. To put it bluntly: why on Earth should the government ever retain a system seized from an entirely innocent system operator? It's not the government's property, and the owner is not charged with doing anything wrong. Worse, by keeping the system out of the system operator's hands, the government does violence to the operation of that system as a distribution channel for the speech of many users. This is a pure prior restraint on publishing and speech, roundly condemned by courts as a First Amendment violation when attempted against printing presses, but apparently quite comfortable to government agents when the publishing is electronic rather than on paper.

Although there is a whole section on the seizure of BBSs and network systems, the Guidelines barely recognize that such dangers are the natural result of a wrongfully executed search. According to the Justice Department, the worst mistake that government agents can make is not trampling on

property, privacy or publishing rights of innocent people when they raid a computer system. No, far worse - it is *returning a seized system when they are not absolutely certain about who is the actual owner (apparently, just giving the seized materials back to the people from whom they were confiscated is too straightforward to be good government practice). The Guidelines advance the philosophy that once the government seizes a computer system, it is theirs to keep unless the rightful owner can win it back in a court battle. As the cliché goes, possession is 9/10 of the law.*

How should agents proceed if they discover that the data or equipment they seek under a warrant is mixed together with other data or equipment they have no authority to seize? The answer is simple to the authors of the Guidelines: seize the whole thing anyway! Government agents in pursuit of clues will not be denied. If they need to "seize the haystack to find the needle," as the Guidelines put it, then the Justice Department believes most searches of the haystack can be justified with or without a warrant.

According to the Guidelines, there is often no need for government agents to waste their time sifting through evidence on-site, just to determine which materials are covered by the warrant and which are not. Their most entertaining legal argument on this score is the "volume of evidence" approach. If agents can plausibly say there is a large volume of valid evidence contained in a given item (e.g., 100 pieces of suspect e-mail, properly identified in a valid warrant, contained in a BBS computer), then they can take that item back to their lab, even if it also contains materials clearly not covered in the warrant (such as 1,000 other pieces of e-mail inside the BBS computer that are entirely unrelated to the warrant or the goal of the search and seizure). In further support of this approach, the Guidelines cheerfully cite past cases where government searches were not invalidated just because they included some wrongfully seized materials (though no such cases involve online systems or e-mail). To the agent who persists in harboring doubts about seizing items clearly not named in any warrant, the Guidelines offer this soothing advice: where searchable data is intermingled with possibly untouchable data, the agents should seize all of the data, seal it, then apply for magistrate's order to search the whole thing.

Needless to say, such a whimsical approach to seizing information not named in any warrant tramples on our e-mail privacy rights. What good is the protection of my e-mail under the ECPA statute, which places an especially heavy legal burden on agents who want to seize it, when they can avoid the statute and grab up my e-mail without any warrant just because it is stored near someone else's e-mail for which they do have a warrant? The prohibitions of the PPA against seizures of publishing-related materials are similarly trampled, if such materials can be grabbed up by government agents on any system where there is also data that can legally be seized. If members of the online press (which includes sysops, sysadmins, mailing list moderators and everyone running a Web page) need to strictly separate their publishing-related materials from all other data on the system just to avoid catchall searches and seizures by the government, then the purpose of the PPA to protect the press is almost entirely defeated, not to mention the First Amendment prohibition against governmental chilling effects on press and speech activities.



The Guidelines show little respect for e-mail privacy rights in other ways as well. For instance, they suggest that when agents seize the e-mail of suspects and non-suspects alike, they can look at non-suspects' e-mail just enough to identify and separate it from the properly seized e-mail. This may sound okay for a moment, but in fact it's a total violation of e-mail privacy rights. Despite the Guidelines' self-serving interpretation, there is no exception in the ECPA giving government agents the right to peek at wrongfully seized e-mail to see if they should look at it further. The Guidelines also refer to supposed online systems where *every piece of e-mail is likely to be part of a criminal act, and thus no e-mail on the system would deserve strong privacy protection from the government. As anyone who has spent any time out on the BBSs knows, there is probably no such BBS in existence. Through perpetuating such false models of BBS activity, the Guidelines attempt to portray e-mail privacy rights as no more than a remote hypothetical possibility.*

Reality check time for government agents: despite anything to the contrary contained in the Guidelines, all private e-mail on public systems is, in fact, protected by the ECPA. The government can peek at a given piece of e-mail only when it gets a warrant from a judge, or other authorization proper under the terms ECPA covering that particular piece of e-mail.

Perhaps the Guidelines' greatest assault on e-mail privacy rights comes in its discussion of legal privacy protection for "stored messages" on a system. The ECPA declares that messages stored on a system for 180 days or less can only be seized by government agents if they have a properly drafted and signed warrant. The Guidelines attempt to pry open a loophole in this clear legal barrier against government snooping by proposing the following conceptual crowbar: once an e-mail message is "opened" by the intended recipient, storage of that message on the system is no longer "incidental" to the communication as described in the ECPA, and a warrant is no longer necessary for searching or seizing that message. There is no legal support given for this interpretation. In fact, it looks like the Justice Department just made it up from whole cloth. From this corner, that interpretation looks dead wrong. The ECPA contains no trigger removing the privacy of an e-mail mes-

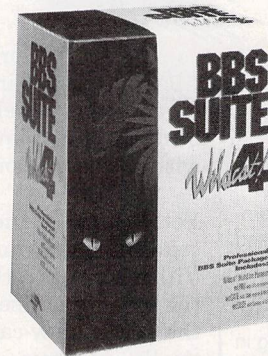
sage once it's viewed by the recipient. Storage of an e-mail message after initial viewing, for purposes of carrying on a discussion, is just as fully "incidental" to the communication as storage prior to the first look at it by the addressee, and should continue to be fully protected under the ECPA.

The Guidelines also have some interesting things to say about encrypted messages. They point out that if the government has probable cause to seize encrypted data, it also has probable cause to break that encryption if it can. On the other hand, when agents are considering a warrantless search of e-mail, such as e-mail contained in an in-house corporate system, the use of encryption by the sender and receiver of the e-mail would signal an expectation of privacy for the e-mail, which in turn would trigger the requirement that the agents get a warrant before proceeding any further.

There is even more to chew on in the Guidelines, but the general idea should be clear by now. Written in a manner that appears even-handed, the Guidelines really are a hint book for federal agents, jam-packed with ways to get at the evidence and contraband they want with minimum interference from pesky legal technicalities. For users of computers and online systems, this amounts to a declaration that the plain protective commandments on the ECPA, the PPA and the Constitution will be continually tested by the government for years to come; and that in practice, our online civil rights will turn out to be somewhat less than what the laws seek to provide.

For those interested in online civil rights, the answer to this latest government move is twofold. First, all attempts by government agents to reduce the civil rights protections of our enacted laws should be fought whenever they arise. And in the longer term, we should seek far stronger laws from Congress to protect our online activities. This way, when the Justice Department issues the next version of its hint book for ignoring civil rights, the resulting compromise will reflect a fairer balance of our right to privacy versus the government's need to stop the bad guys. ♦

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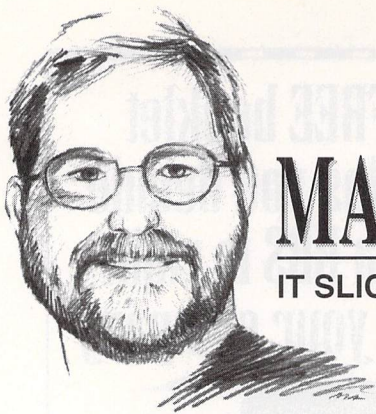
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BOA





# MACINTOSH NEWS

by Bill Gram-Reefer

## IT SLICES - IT DICES

There were some interesting reactions to Global Village's pre MacWorld Expo announcement that it intends to become an IP provider in addition to selling its own OneWorld Fax/ARA boxes and popular fax/modems. Combining modems with IP service sounds like a natural mix, doesn't it?

Yet, one colleague wrote in amazement, "This is a truly bizarre announcement. Next they'll (Global Village) go into the steak-knife business, hawking the sharpened, serrated edges on the OneWorld as the perfect cow-carving vehicle. And in order to vertically integrate, they'll purchase a ranch down in Texas and start raising Holsteins. Guess I shouldn't be looking for a PowerPort Gold for my PowerBook after all. I'd prefer to purchase from a company focusing on modems."

Then there's the "Dennis Hayes" approach to the question; it goes something like this: "The modem business has become so competitive, so price sensitive, so (I hate to use the term) commodity-like, that despite brand-name mind-share, there really is no profit margin in making and selling modems any more. It's gotten so rough we can't even pay our creditors because receivables suck. Maybe we shouldn't have licensed MNP or that sequence from the CPM manual after all."

By all appearances, Sierra, AT&T and Rockwell seem to be doing okay selling chip sets for modems (but at least Rockwell and AT&T have other business to fall back on). So maybe it's just the manufacturers who are having difficulty controlling production costs and competing in a very standardized product category. I mean, have you ever sat down and looked at five different data sheets for five different modems? V-dot-this, V-dot-that, hell it's all the same. You've got to wonder why people have such problems with these things. Besides old CompuCom and 19.2 terbo fans, who'd buy a non-standard modem these days anyways? Who'd make one? Yet, what's to distinguish one modem maker from another besides name brand and perhaps making your modem stand up on end with a curved chassis that looks like a metallic toe-nail? Now there's differentiation just jumping off the shelves at Egghead!

So if the modem market is going to hell in a hand basket, what do you do? One way would be to compete on providing state-of-the-art features like integrated voice, data, fax, and networking capabilities, controlling costs, and providing the best support in the business. Sounds reasonable.

Another way to work it is to leverage your leading market share of Mac users, bundle even more product, and have people truly believe this to be leading-edge stuff, even though (at this writing) only the TelePort Bronze faxmodem can actually distinguish between a fax and data call. No voice, no adaptive answering, but plenty of market share. So milk it. Everyone knows Mac people are techno-weenies; they may be good artists and hacks, but they just don't understand hardware (or marketing).

It's a piece of cake once you've figured out there are plenty of people out there that will buy five-year-old technology at a premium - as long as it's dressed up nice and marketeers, well-fed analysts, and trade press that don't know any better swear up and down that it's cutting-edge technology - and, better yet, it comes bundled in an Apple Performa box at Costco. Someone at Global Village even thinks those corporate customers might even pay over \$900 retail for a network fax box even though they can get the same thing for under \$300 by purchasing any *modern* fax/modem and port-sharing software from either Hayes or Stalker.

## HAVE WE CROSSED THE CHASM YET?

So, how do you get to selling IP service because you sell tons of modems to late adopters? The only real answer is: with practically no margins in modems you better sell something that can beef up the receivables (see Hayes and Practical Peripherals) and sell the modems as a loss leader so you can make the 10Qs shine by peddling the installed base and reselling IP access and eventually some content. Then let the stockholders cash in two years from now when MCI comes knocking. The question isn't, "Does NBC sell TVs?" It's "What does RCA expand into next?" Once it was NBC, now it's satellite dishes. Look at Intercon. Sure they have a neat business selling TCPConnect, but their real leverage is PSI. From modems to Netcom is not a reach.

## APPLE INTERNET LISTS

If you can't get enough of the myriad discussions about the latest minute details of NewsWatcher on [comp.sys.mac.com](http://comp.sys.mac.com), and are hankering for even more he-said she-said about the super-duper information highway, then here are a couple mailing lists I'm sure you'll enjoy.

According to list Mom, Chuq Von Rospach, The first list, [apple-internet-users](http://apple-internet-users), "is designed as a place where people who are using Apple computers as clients to the Internet and Internet services can discuss things. We at Apple want to encourage the use of

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Apple computers on the Internet (for obvious reasons) but otherwise, we plan to keep our hands off the list to the greatest extent possible."

There is a second similar list available for Apple Computer-based internet service providers, **apple-internet-providers**. This list is designed as a place where people who are using Apple computers create services and provide information on the Internet.

To subscribe to either list send e-mail to **listproc@abs.apple.com**, leave the subject field blank, then in the body write: "subscribe apple-internet-users your name" and/or "subscribe apple-internet-providers your name". Sites are available for FAQs and archives of discussions. According to Chuq, "Through the listproc address, send a message of index apple-internet-users to see what's in there." The ftp directory is on the machine **abs.apple.com** in directory **pub/apple-internet-users**. You can access the files through gopher using the same path. A home page for Mosaic connections is under construction. To update FAQs contact **chuq@abs.apple.com**

## IP OPTIONS

One optimistic fellow I know believes that the long-awaited-but-eventual transition to ISDN is upon us and we'll have ISDN cards for \$100, and the RBOCs will have flat \$30/month rates. Another editor has suggested in these pages that, RSN (real soon now), your IP access will be hanging off your TV cable box and, thanks to deregulation, you'll be using RCA satellites for digital broadcast instead of TCI and their snow storms.

Until then, if you're in California, you might want to check out InterNex which features Integrated Services Digital Network (ISDN) for dial-up access at 56 Kbps to 128 Kbps and Frame Relay for full-time 56 Kbps to T1 connections. InterNex, an authorized PacBell reseller recently introduced measured rate ISDN connectivity for single hosts and small LANs, individuals and businesses, giving them the option of ISDN/IP dial-up service for high speed access to Mosaic pages, Gopher searches, BBSs, e-mail and FTP file transfers at the prices of slower serial line services. With several Points of Presence (POPs) around the Bay Area, you can make ISDN connections with local calling charges. New locations throughout the state will be added this year.

InterNex has a new plan for home ISDN (now available in some areas). The new InterNex packages and Pacific Bell ISDN tariffs mean that residential customers pay no phone connect time fees during off peak times (5p.m.-8a.m. weekdays and all day and night on weekends).

An ISDN/IP connection is a dial up service with speeds of 56 Kbps or 128 Kbps. ISDN/IP can be connected to a single host or integrated into your network, and connects automatically when information is passed to the Internet. Macintosh netters can start with metered, dial-up access, starting at \$29.00 a month plus peak-time connection rates, LAN packages start as low as \$49.00 a month.

Frame Relay is a continuous connection for Web or BBS servers and other two-way applications that require equipment to be always available to the Internet. For a fee, you can have a continuous T1 service certified at 128 Kbps connected to the Pac Bell Cloud and from there to the InterNex backbone. InterNex Frame Relay rates for 56 Kbps over dedicated 56 Kbps and 128 Kbps over fractional T1 cost \$500 for start-up and \$250 monthly, vs. \$600 startup and \$400 monthly for a 128 Kbps pipeline, respectively. Alternatively, Pac Bell rates range from \$995 startup plus \$125 per month and \$1,695 startup and \$313 for the same configurations.

InterNex can arrange everything to get you connected including ordering the ISDN telephone line and all the hardware and software you need. InterNex also offers Web-page services, and is constantly re-evaluating hardware to help bring the cost down quickly. InterNex offers complete domain name registry, permanent IP address, SMTP or POP e-mail accounts, and NNTP client news feeds. AccessWorks boxes to connect serial ports to the digital feed begin at around \$200 for dial-up service.

InterNex is just one of many new providers ready to meet the coming challenge of building the new commercial on-ramps to the Infobahn. Hopefully market forces will help push the pricing down to the point so that by this time next year, we'll all have a good laugh over how expensive it once was. InterNex Information Services, Inc. 1050 Chestnut Street, Suite 201, Menlo Park, CA 94025; (415)473-3060 voice; (415) 473-3062 fax; **sales@internex.net** e-mail.

## CSI SHIPS SCSI HUSTLER

Creative Solutions Inc. has completed beta testing and is now shipping its new 2-port Hustler SCSI Serial Accelerator (SEQS2). To retail at \$395, the external box adds one or two high-speed serial ports, supports all major MacTerminal and BBS software, increasing serial performance on all Macs (230,000 baud on one port or 155,000 baud with two port use with throughputs approaching 40 Kbps!). Apple Toolbox compatible, the SEQS2 supports V.FC and F.Fast modems, buffers data up to 64K, provides Mac style (din-8) serial ports to the modems and standard SCSI connections to the Mac. So, if you're out of NuBus slots or if you want to expand your board and don't want to worry yet about PCI, get one.

Get two, they're cheap. Creative Solutions Inc., 4701 Randolph Road, Suite 12, Rockville, MD 20852; (301) 984-0262 voice; (301) 770-1675 fax; CSI is also on eWorld in the Vendor booth.

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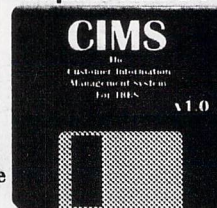
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| 4 User - \$ 75.00 | 32 User - 175.00 |
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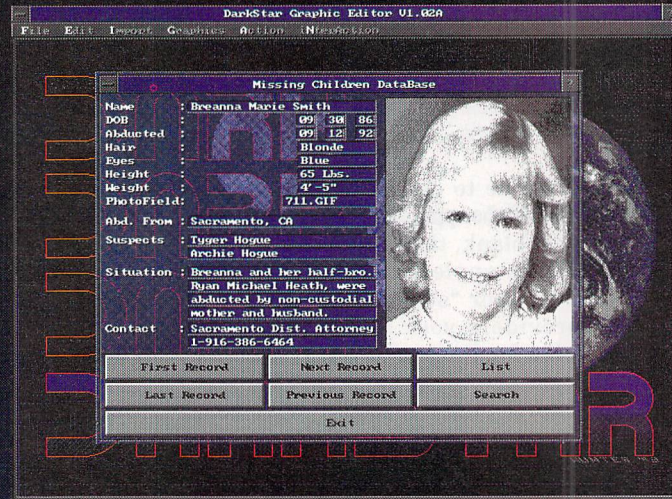
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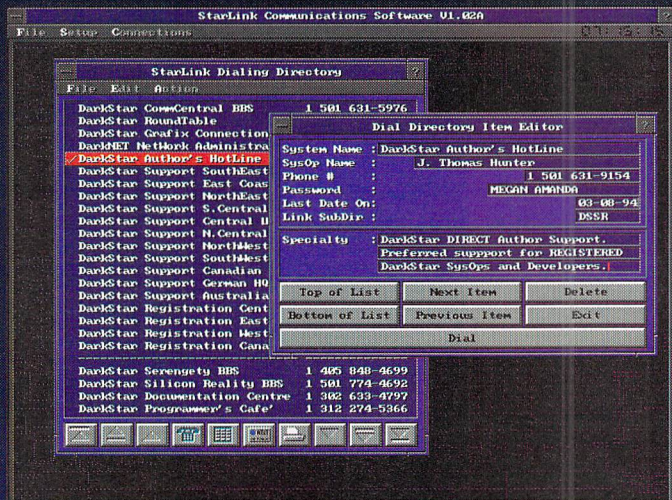
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Sample menu under construction in the DarkStar graphic editor, with iconbutton import facility overlaid.

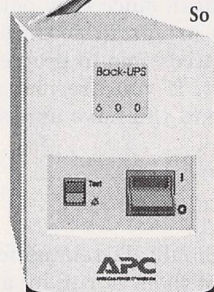


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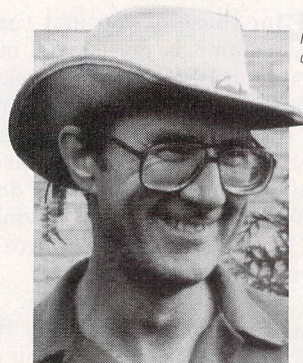
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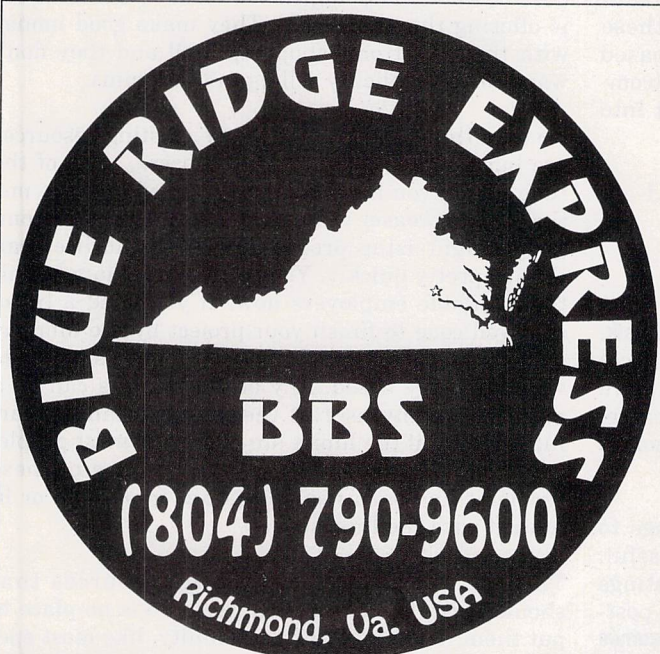
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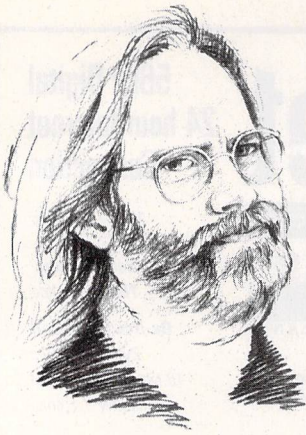
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# BEGINNER'S LUCK by Doug Shaker

## ADDING UP THE COST OF BEING MOTHRA'S DAD

Doug Shaker owns and operates The Smalltalk Store.

He can be reached via e-mail at [doug@smalltalk.com](mailto:doug@smalltalk.com). He has one wife, two children, three cats, four computers and five telephones.

For those of you just tuning in, this column is my journal of an attempt to start a BBS system. I was supposed to pick some BBS software last month, but I didn't. I spent my time ranting about the marketing practices of the BBS software suppliers. That was fun, but now I've got to get down to it and pick something. It's bad enough having a rep as a hippie-nerd. If I pick up a rep as a jive hippie-nerd, I'll really be in trouble.

Let's start with the purpose for my BBS. I run a small mail-order software house. I sell development tools for Smalltalk programmers. It isn't a huge community, probably between 20,000 and 100,000 worldwide. It is growing at a pretty good clip, about 150 percent per year. There are some good electronic resources for this community, but many of these resources have problems that could be addressed in a BBS.

By the way, these problems are good news for BBS operators. If you think of the Internet as competition for your BBS, if you feel it's hot nasty breath on your BBS's neck, think again. Most of these problems are endemic to existing Internet-based electronic resources. By addressing their shortcomings, you should be able to make the Internet into your BBS's friend.

Let me list some of the electronic resources I am competing with and their problems.

### NETNEWS

There is a netnews group called [comp.lang.smalltalk](mailto:comp.lang.smalltalk). It provides a good forum for discussion of technical issues and averages 30 to 50 postings a day, if there isn't a flame war going on. It is a valuable resource, but it does have faults. These faults are common to most netnews newsgroups.

The main problem is that commercial postings to newsgroups are frowned upon, even when useful. Netiquette demands that product-related postings be made to [biz.comp.software](mailto:biz.comp.software), while job-related postings are made to [misc.jobs.offered](mailto:misc.jobs.offered) or [misc.jobs.resumes](mailto:misc.jobs.resumes). Violating this restriction earns you a boat load of hate e-mail.

This custom has the positive effect of allowing the technical discussion to go on, largely undisturbed. However, it also assures that the "commercial" Smalltalk postings will be buried in a newsgroup which most Smalltalk programmers don't read and

which will contain a thousand other postings that have no interest to Smalltalk programmers.

### FTP ARCHIVES

There is an archive of Smalltalk products that is available for FTP from two locations: [st.cs.uiuc.edu](ftp://st.cs.uiuc.edu) and [mushroom.cs.man.ac.uk](ftp://mushroom.cs.man.ac.uk). The files at the two locations are virtually identical, since they both mirror the other. The archives are great sources of code, but they are not easily accessible to people without a real Internet account. If you are just a schmo with a CPU and a modem, you have no way of getting at the stuff easily.

### COMPUSERVE

There are a number of Smalltalk-related forums on CompuServe, but each of them is run by a particular Smalltalk vendor. There is no dialect-neutral forum available, so discussions of the language, minus dialect issues, never seems to happen. In addition, there are some things that CompuServe doesn't want you doing on the forums. One of these is offering things for sale. They make good money with their electronic shopping mall and they don't want people explicitly selling in the forums.

None of the problems with these existing resources are huge for the majority of the users, most of the time. But if you have just been canned - excuse me, the correct weasel words are "effected by our company's rightsizing program" - your priorities can change pretty quickly. You want your resume to hit the available employers now. If you need a bit of archived code to finish your project by the Monday deadline, and you don't have FTP access, you are well and truly hosed. Any of these limits can be a problem for any user, if their circumstances warrant it, even if the limits are useful for most people, most of the time. A BBS can solve some of these problems and earn itself a market in spite of or in concert with the Internet.

There are also some electronic resources that should exist, but don't, because there is no place to put them. The Smalltalk community, like most special interest technical communities, is widely distributed. It is also growing quickly. Only a few dozen universities have enough demand in their local community to offer a Smalltalk class. But there are thousands of people who would like to learn Smalltalk and who would like to take a class to help them do so. Online Smalltalk classes would be a solution, but there is no place to offer them in the existing Internet-based electronic resources.



Enter the BBS. I can allow job-related postings and product-related postings. I can have instant modem access to a mirror of the code archives. I can have dialect-neutral discussion groups. I can have online classes in the form of for-pay forums. In basic terms, because I am not burdened with a lot of historical or organizational baggage, I can fill in the cracks left by the standard electronic resources. Instead of an on-ramp for the Internet, I can be a destination. Continuing that noxious information superhighway metaphor, I can have a little bed and breakfast kind of place.

OK, so what does all this mean for my BBS? I need to be able to have netnews groups and Internet mail, so that the isolated Smalltalk programmer with a CPU and modem can get all of his Smalltalk fix at one location. There are some esoteric mailing lists that I would like to translate into forums, for the same reason. I need to have QWK access, so that the isolated Smalltalker doesn't have to spend a fortune on phone calls. I need to have telnet access, so that people with Internet access can get access without spending a fortune on phone calls. I need to have chat, so that classes can meet. Finally, I would like to be able to have a web page for my business, if possible.

I am not trying to make money with my BBS, but I am not trying to lose money with it either. Until it becomes a living place, access will be free. After it starts to have some life to it, I will charge some minimal fee for basic access, and something more for Internet access other than mail and news.

Full-time Internet connections are a little expensive. Even if I just do a 28.8 Kbps SLIP connection, it costs. Startup costs for the phone lines and the modems are about **\$3000**. A leased phone line to a provider is about **\$125** per month in my part of the country. Then the provider wants another **\$150** per month or so. Not huge, but too much to commit to without some evidence that my BBS is more than just a nerdy power trip on my part. I plan to start with just modems and a dial-up SLIP connection. Then, if I get customers, I can add the Internet link.

Boiling it all down, here are my requirements:

1. QWK support.
2. Netnews support, either through uucp or NNTP, preferably both.
3. Internet e-mail support, either through uucp or SMTP.
4. Inbound telnet support.
5. Runs on the Pentium I bought last month.
6. Doesn't cost too much in a two-line modem configuration.
7. Won't cost me too much to grow to something larger, like 4 phone lines and 8 telnet connections.
8. If possible, it allows me to have a web page.
9. If possible, it doesn't run on DOS.

The reason for the last preference is that I think DOS is the bastard child of the Neanderthal CP/M. (For those of you too young to remember, CP/M was the personal computer operating system before DOS; it addressed a maximum of 64K of memory.) It is a single-user single-tasking operating system that is fundamentally ill-suited for BBS software and for Internet connection. I understand the market forces that have pushed many suppliers to develop on DOS, but I would prefer not to participate in this kludge, if possible.

There are a couple of things I don't need in my system:

1. A RIP interface or any other GUI interface. My users, for the most part, will live thousands of miles away. All of the information they need will be simple text files. A GUI interface would just cost them on their phone bill.
2. A database connection. I've got nothing but free-form text data. A database would add nothing.

Armed with this dubious list of attributes, I have been looking at BBS software. I started with Unix-based software, because of my prejudice against DOS. I've looked at the following packages: Teammate from MMB, Xchange from Zmax, UniBoard from Riccardo Pizzi and the Unix version of Major BBS from Galacticomm. Then as I continued my search, I also looked at TSX-BBS from S&H Computer Systems, TBBS from eSoft, and the DOS version of Major BBS.

I suppose I should have looked at more packages, but, lordy, those brochures do go on. They feature sharp graphics and paragraphs galore about my impending rise to the top of the BBS charts but precious little in the way of technical detail. After a while I just couldn't stand to look at another brochure that told me how their stuff would let me operate another CompuServe.

Here is how they stacked up, for my purposes. You would (or should, if you have a brain in your head) come up with an entirely different rating if you are a wealthy person with a penchant for GIF files or if you don't have telnet customers or if you didn't hate DOS or if you didn't want your own web page or if you needed a database or...well, you get the idea. To get an idea of price, I priced them out in two configurations. These are:

Mothra: a 2-line modem-only system that gets e-mail and netnews through some modem-based hardware, using either uucp or a dial-up SLIP/PPP account.

Baby Godzilla: a 12-line system with 4 lines on modems and 8 lines on telnet. It should have a continuous TCP/IP connection to the Internet, though I have no idea how it will be implemented - maybe SLIP, maybe ISDN, maybe leased line with a frame relay device. If we can build Baby Godzilla, we hope it will grow to something larger.

Join me, now, in a forced march through this list of BBS software and let's see just how much folding green it will take to build these suckers.

TEAMate from MMB (e-mail: [bob@mmb.com](mailto:bob@mmb.com), (800)832-6022, demo system: (310)318-5302, telnet: [teamate.mmb.com](http://teamate.mmb.com)). Basically, a nice Unix product, but too much money for me. It supports telnet clients and web pages. In fact, it even has a way of integrating the web pages with the BBS file libraries. The main problem is the price. As far as I can tell, to get Mothra, my basic two line system, going I would need the 8-user base module (**\$2000**) plus the Unix Mail Gateway (**\$500**). I might also want a license to distribute client software for the Macintosh and for Windows to my customers (**\$3750**). When I wanted to get Baby Godzilla going, I would need to upgrade Mothra to 32-users and add some new software. The upgrades would cost me **\$2000** for the base, **\$700** for Unix mail, and **\$3750** for the client software. And I would need to add chat (**\$1500**), and web support (**\$1500**).



This leaves me with **\$6250** for my basic system and **\$15,700** for my telnet system. It's nice software, but just a tad over my limit, if you know what I mean.

Xchange from Zmax (e-mail: **sales@zmax.com**, (315)635-1882, demo system: (315)635-1947). A reasonable product, available for a large number of Unix boxes at a reasonable price, but no QWK support. It comes with NNTP news support and SMTP mail support. In pleasant contrast to most BBS companies, Zmax sells you everything in their product line for one relatively low price. They don't have a list of add-on after add-on, nickel and dime-ing you until you have spent thousands. For Mothra, I would have to buy a 4-line system for **\$695**. Later, to upgrade to Baby Godzilla, I would have to spend another **\$1300** to up the license count, bringing my total cost to **\$1995**.

I thought about getting Xchange for a long time, but without QWK support, I would be abandoning the base customers whom I wish to serve - people without net access. If my modem users don't have QWK support, the phone costs will eventually push them to stop using the system.

UniBoard from Riccardo Pizzi (e-mail: **pizzi@nervous.com**, no phone number, demo system: (216)241-7541). This is a very inexpensive product for Unix. It has mail and news support. It has nice ANSI terminal support and support for multiple languages on one BBS. Telnet connections aren't a problem. FTP transfer and web pages aren't supported directly, but since this is Unix, there is nothing preventing you from running these on the same system as the BBS. There is no QWK support for the board itself, though a freeware utility called uqwk could be used for regular Unix netnews and e-mail. UniBoard is very, very inexpensive. Mr. Pizzi wants just **\$50** for a two user version and **\$200** for a 16 user version. There is a Linux version, so you could get started with this for less than **\$100**. Not bad. If I didn't need QWK support, I would give it a try.

Unix version of The Major BBS from Galacticomm (e-mail: **sales@gcomm.com**, (305)583-5990, demo system: (305)583-7808, login and type **/go unix**, telnet: **unix.gcomm.com**). Technically, this is a nice solution. I have tried their demo system out and it has all the functionality of their DOS BBS, but it also includes FTP (in and outbound), telnet

(in and out), and links to netnews and internet e-mail. They don't have direct web support, but you could run a public domain web server on the same machine that you are using for the BBS. It is a nice solution all round. My main hassle with it is the price. The Unix version of Major BBS starts with an 8 line version for **\$2995**. I don't think Mothra would require anything more than the base package. To upgrade to Baby Godzilla, I would have to upgrade to a 32-user version for an additional **\$6000**, bringing my total cost to **\$8995**. Yow! Apparently they are aiming at corporate customers. I like the technology, but nine grand is just too much for me.

TSX-BBS from S&H Computer Systems (e-mail: **71333.27@compuserve.com**, (615)327-3670, demo system: (615)320-1820). This is not a Unix system, but it is not a DOS system, either. TSX-BBS runs on a proprietary OS called TSX. TSX is a multi-user, multi-tasking OS that happens to use the DOS file system (translation: you can install it on a DOS box and all your files stay the same; you can deinstall it and return to DOS and all the files stay the same). It will also run most DOS door programs. The BBS itself is reasonably nice. It seems to share much of the design philosophy of eSoft's TBBS. It is very configurable and, because carriage returns are not necessary at the end of commands, it seems very responsive and quick. It has a visual and keyboard "pop" that I like. A two-line system is pretty cheap - **\$300**. To get Mothra going, I would need to add Chat (**\$100**), a programming language for extending the system called TPL (**\$100**) and the Internet Connect Bundle (**\$1000**) bringing me to **\$1500**. For Baby Godzilla, I would need to upgrade to sixteen lines (**\$650**), bringing my total cost to **\$2150**.

TBBS from eSoft ((303)699-6565, demo system: (303)699-8222). This is DOS-based, but I love the look & feel of TBBS systems. They usually have a bright bold appearance and since commands don't require a carriage return, their systems seem to "pop" nicely. To build Mothra, I need a 2-line version of TBBS (**\$295**) plus QWK support (**\$99.95**) and the Personal Internet Mail Processor (**\$299**) for a grand total of **\$694**. A nice price and nice software. The problem comes when I try to get Baby Godzilla going. Instead of rewriting their system under Unix, eSoft has decided go for a hardware solution, a box called an IPAD. The IPAD connects a DOS TBBS system to the Internet

and it serves a series of other neat functions. It acts as a router, a terminal server, an FTP server, a mail server, and a news server. These are useful functions - the really useful one is the router - but the cost of one of these babies is between **\$3995** and **\$6000** depending on the configuration. A router is vital if you have a local LAN that you are trying to firewall off, so for big installations, the IPAD is a good idea. The hardware costs substitute for something you would have to buy anyway, a router, and it connects your BBS to the Internet. However, I don't have a LAN that will be connected to the BBS, so I wasn't planning on buying a router. If I go with TBBS, upgrading from Mothra to Baby Godzilla costs me **\$5100** in additional purchases - **\$600** to upgrade to 12 lines plus about **\$4500** for the IPAD. This brings the total cost of Baby Godzilla to **\$5794**.

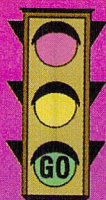
DOS version of The Major BBS from Galacticomm (e-mail: **sales@gcomm.com**, (305)583-5990, demo system: (305)583-7808, telnet: **gcomm.com**). I like these guys; they think like sysops and I think they know how to sell to sysops. Mothra would cost me **\$508** - **\$259** for a basic 2-line version, plus **\$249** for the Major Gateway, an add-on that enables a uucp connection for news and mail. Moving to baby Godzilla, would cost me **\$1244**. I would need **\$498** for an additional 12-users, and I would need **\$746** to trade in the Major Gateway for the Internet Connect option (**\$995** list). Internet Connect lets you add FTP (in and outbound), telnet (in and out), and web service to your system. This brings the total cost of a DOS-based Baby Godzilla to **\$1752**.

Putting it all into one tiny table we get:

|            | Mothra | Baby Godzilla | Problems  |
|------------|--------|---------------|-----------|
| TEAMate    | \$6250 | \$15700       | Cost      |
| Xchange    | \$695  | \$1995        | no QWK    |
| UniBoard   | \$50   | \$200         | no QWK    |
| Unix Major | \$2995 | \$8995        | Cost      |
| TSX-BBS    | \$1500 | \$2150        | Weird OS  |
| TBBS       | \$694  | \$5794        | Cost, DOS |
| DOS Major  | \$508  | \$1752        | DOS       |

The ones that will do the job and which I can afford are TSX-BBS and the DOS version of Major BBS. So now the question is, do I hate DOS enough to pay **\$402** to avoid it? Well, yes, I do. I will be buying and installing TSX-BBS in the next month. Stay tuned for the birth of Mothra! ♦





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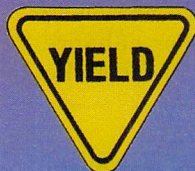


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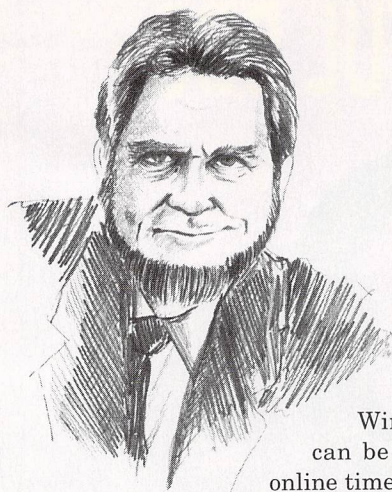
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# DELPHI by Walt Howe

## DELPHI INTERNAV WINDOWS SOFTWARE UPGRADED

In January, DELPHI upgraded the InterNav software for Windows users. As before, the software can be downloaded free without charge to online time.

There are many enhancements, and anyone with one of the earlier versions should download it for the improvements. It is strictly for Windows users, and it requires at least a 386 with 4 megs of RAM. Those with version 1.1 or later can download just the update. Anyone with an earlier version should download the full program.

The enhancements are too many to list completely here, but these are the key improvements:

1) Point-and-click navigation through DELPHI menus and prompts has been enhanced, and is now easier and more reliable than ever!

The first word of all menu items, all numbers on numbered menus, and commands that appear within prompts are now highlighted in BLUE.

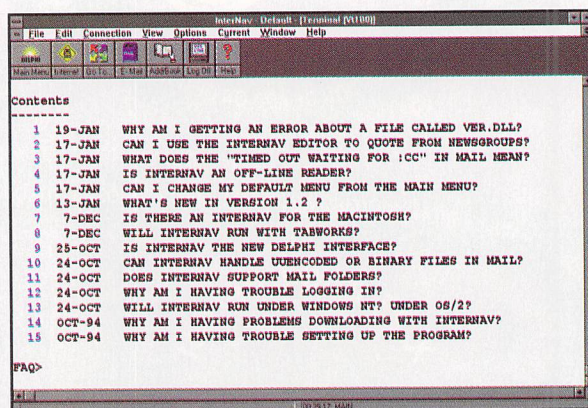
If you position your mouse pointer over any of these words, the pointer will change into a small hand with outstretched finger, and a SINGLE click selects the word and sends it as a command to DELPHI. The right mouse button sends a <Return>, and can be used to respond to More? prompts and selected default actions anywhere.

2) Messaging from InterNav's Forum, Usenet, and E-mail editing windows has been greatly accelerated. The long pauses that characterized earlier versions is gone.

3) Signature files can now be automatically appended to E-mail as well as Forum and Usenet messages, and the setup dialog has been simplified.

4) The Address Book, Go To, and several options dialog boxes have been redesigned for simplicity and ease-of-use.

5) Automated login scripts have been extended to be more reliable, and to give more helpful advice when things do go wrong.



### InterNav FAQ menu

6) Font selection has been simplified, and now supports italics.

7) There are new icons for the Main Menu and Go To buttons, and several buttons have new, more readable labels and many other minor enhancements that all add up to a program that makes DELPHI easier to use than ever!

As before, the InterNav Support Forum is available at all times to ask questions, and the time spent in the Forum is free. A FAQ, (Frequently Asked Questions), menu has been added to help with common questions. The first graphic shows what the FAQ menu looks like on the InterNav screen.

One of the Frequently Asked Questions is repeated here, which concerns changes to appear later this year for DELPHI.

### IS INTERNAV THE NEW DELPHI INTERFACE?

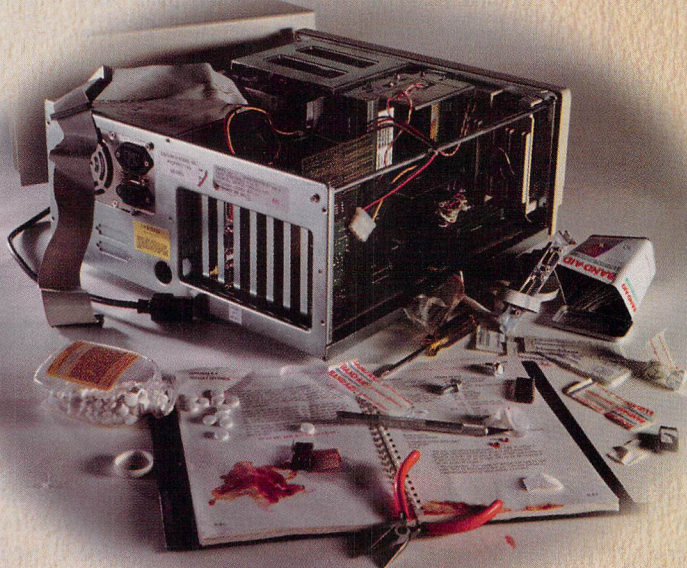
InterNav is a "front-end" for the current DELPHI text interface. It is not the new Graphical Interface that you may have heard about. A new DELPHI interface is coming, and the staff at DELPHI is working hard to bring it to you as soon as possible.

InterNav was designed to make today's DELPHI easier to logon to, and easier to use. It features automatic logon and logoff, full-screen editing windows for e-mail, forum, and Usenet messages, an e-mail address book, and more. It's an "interim" product that we've made available free of charge to

Walt Howe is the Internet Special Interest Group Manager on DELPHI. He has sysoped for several BBSs including the old Source network, CompuServe, and Delphi. Over the last four years he co-authored with Steve Lambert **Internet Basics, Your Online Access to the Global Electronic Superhighway**, available in most bookstores. Walt has also written a number of user manuals for various computer companies, including Delphi. Walt can be reached by e-mail as **walthowe@delphi.com**. A five hour free Delphi membership is available by dialing **800-695-4002** by modem and using the password **INTERNETSIG**.



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make your time online more enjoyable, while we all wait for the "next generation" of DELPHI to arrive.

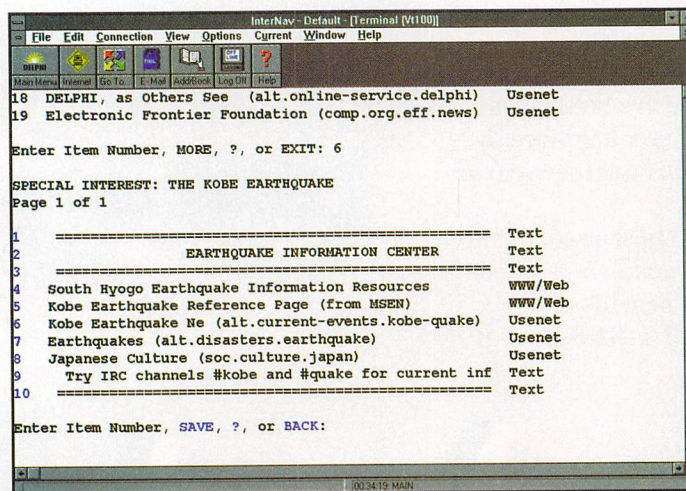
We will continue to develop the InterNav program until the new interface is released, and we welcome your comments and suggestions. Feel free to use the forum here to let us know what you think.

## DELPHI'S INTERNET NAVIGATOR

DELPHI is calling its new combined gopher/World Wide Web browser/Usenet newsreader menu system the Internet Navigator. The remainder of this month's column shows three examples of Navigator menus that were put together to support a particular topic. The examples show the Earthquake Information Center that was put together at the time of the Kobe Earthquake, a special Navigator that was created to support a week long conference, and the Navigator assembled to support the new TAXTIME Forum. By making Navigator menus available to each SIG and Forum, DELPHI is integrating Internet resources with the resources created by DELPHI and the many SIG and Custom Forum hosts. When you visit a SIG or Forum on DELPHI, you can expect to find pointers to Internet resources related to it. It helps to bring a lot of orderliness to the chaos of the Internet.

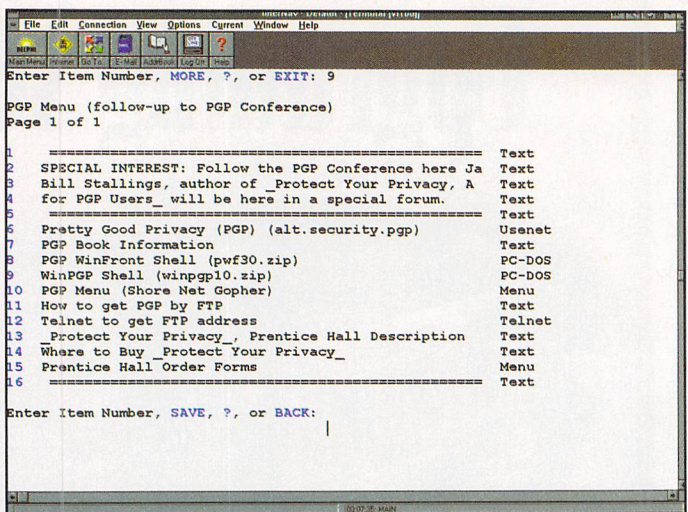
## DELPHI AND THE KOBE EARTHQUAKE

Within hours of the Kobe Earthquake, DELPHI created the Earthquake Information Center shown in the second graphic in the Internet Special Interest Group (SIG).



### Delphi Tracks Kobe Earthquake

The menu includes two World Wide Web sites that were created at Berkeley and MSEN to provide pointers to many more information resources, the newsgroups that carried current information on the Kobe Quake, and tips on which IRC (Internet Relay Chat) channels carried current earthquake information. As in previous disasters, Internet links were somehow maintained into areas where there was substantial loss of power and downed phone lines.



### Pretty Good Privacy Conference

#### PRETTY GOOD PRIVACY CONFERENCE

While DELPHI holds many conferences during the course of a month, the conference with Bill Stallings, author of "Protect Your Privacy, A Guide for PGP Users" is a good example to show how Internet resources can be marshaled to support such an event. PGP is the Pretty Good Privacy encryption program created amid much controversy by Phil Zimmerman. During its history, it has run into legal problems over patent rights and United States' bans on export of encryption software to other countries. With this background, and the need many have expressed for secure encryption, the conference created a lot of interest.

Stallings expressed a preference for a week-long conference by messages over a single live session. DELPHI created a special temporary message forum to hold the conference, and posted the Internet Navigator menu shown above.

This menu consists of the **alt.security.pgp** newsgroup, information on the featured book and where to get it, direct pointers to FTP and download supporting software that can be used along with PGP in Windows, and a telnet connection to a site where U.S. Citizens can get the FTP address of the PGP software if they answer several questions correctly. The telnet provision was set up by MIT to provide a mechanism that keeps the regularly changing FTP address of the software a secret until the applicant for the address has certified that he or she is a U.S. citizen and will not export the software. Despite such efforts, versions of PGP are widely available in other countries, but the formalities are still observed.

#### THE TAXTIME (LA HORA DE LOS IMPUESTOS) FORUM

The newest Forum as of this writing concerns a very unpopular subject, but it is still attracting its share of attention. The new TAXTIME Forum is a bilingual English/Spanish Forum to provide tax advice and help. Anyone who enters the Forum for the first time reads this:

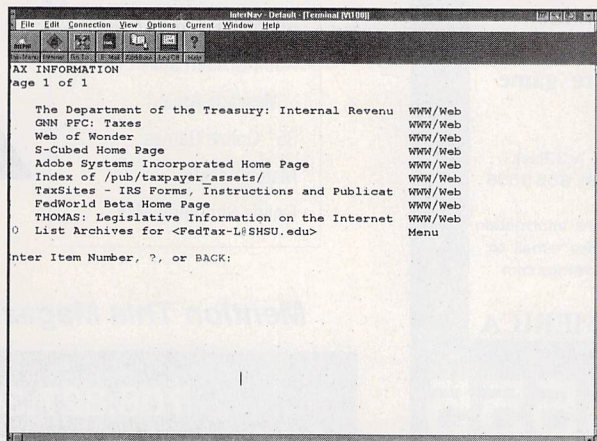
"Welcome to the TAXTIME forum. DELPHI intends this to be a place where members can ask ques-



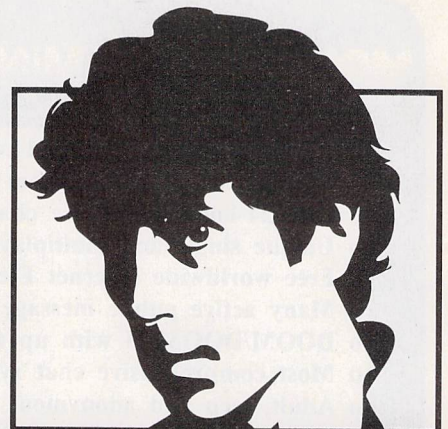
tions, express opinions, and help fellow users who are perplexed by the complicated tax laws of the United States. Tax professionals and taxpayers alike should find this a comfortable place to exchange views and share information. Browse the database files and check out the Internet connections. You've come to the right place.

"Bienvenidos al foro LA HORA DE LOS IMPUESTOS. DELPHI les brinda un lugar donde pueden hacer preguntas, expresar sus opiniones, y ayudar a otros tributarios confundidos por la complejidad del código de impuestos norteamericano. Contadores y contribuyentes deberían sentirse cómodos aquí; este foro es suyo."

As with most DELPHI SIGs and Forums, an Internet Navigator menu, part of which is shown was set up to support the TAXTIME Forum. This menu consists of a series of links to World Wide Web sites that provide tax information and an FTP site with archives from the FedTax-L mailing list. Other menus include pointers to related Usenet newsgroups and gopher menus. ♦



Navigator Menu for TAXTIME Forum



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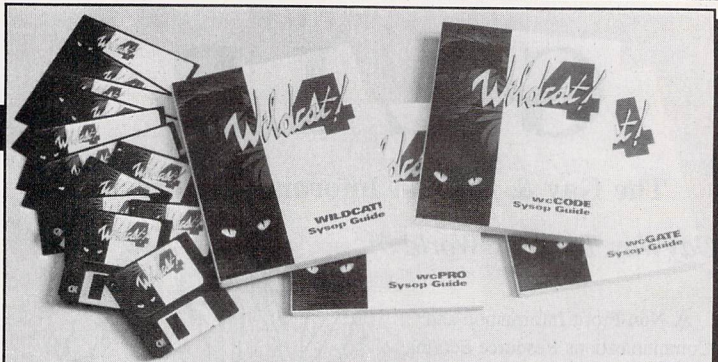
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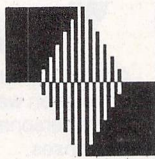
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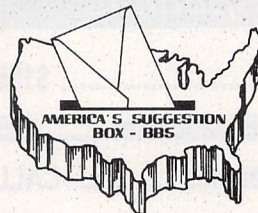
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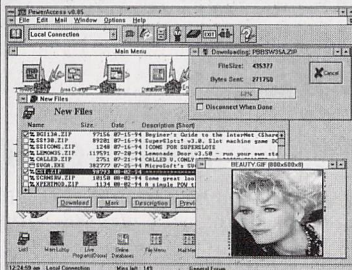
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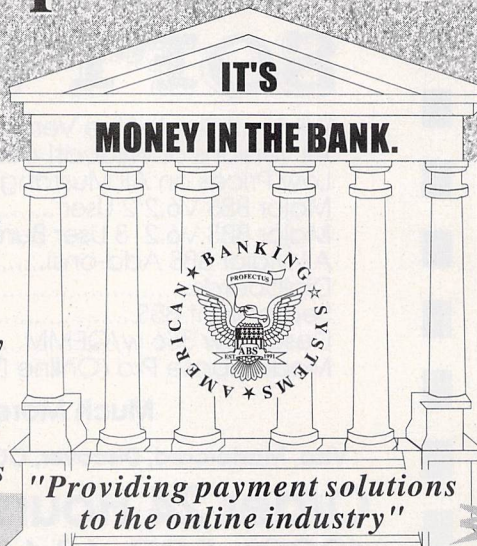
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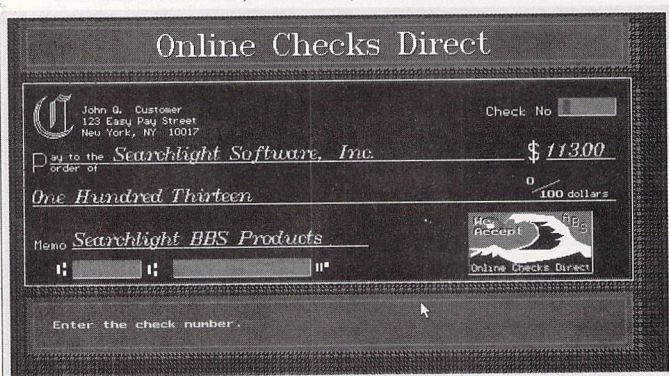
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|-----------------------|-------------------------------|--------------|---------------|--------------|----------|-------|------------|-------------|-----------|----------|-----|-------|------|-----------|-----------|
| C-Net 128             | RM Software                   | 201-843-3116 | 201-843-3116  | 201-845-8250 | Com128   | 1     | 1          | OS          | N         | O        | O   | Y     | O    | \$100     | \$100     |
| CNet Pro 3            | Perspective Software          | 313-537-6168 | 313-537-5942  | 313-255-2466 | Amiga    | Unlim | 100        | OS          | Y         | I        | I   | Y     | Y    | \$229.95  | \$229.95  |
| CocoNet               | Coconut Computing, Inc        | 619-456-2002 |               | 619-456-0815 | UNIX     | 1000  | -          | OS          | Y         | I        | N   | Y     | Y    | \$18,995  | \$395     |
| DLG Professional      | Telepro Technologies          | 403-341-7826 | 403-341-7826  | 403-347-3262 | AMIGA    | Unlim | 29         | OS          | N         | I        | 3   | N     | Y    | \$299     | \$299     |
| Excalibur BBS         | Excalibur Communications, Inc | 918-496-7881 | 918-491-0033  | 918-496-8113 | Windows  | Unlim | 8          | OS          | Y         | 3        | 3   | N     | Y    | \$349     | \$199     |
| EXCELSIOR! Pro        | Sycam Design Software         | 313-774-2153 | 313-772-5802  | 313-772-6442 | Amiga    | Unlim | Unlim      | OS          | N         | I        | I   | N     | Y    | \$199     | \$199     |
| Faulken               | INFO*Share, Inc               | 703-791-2910 | 703-791-2910  | 703-749-2889 | DOS      | ?     | 64         | I           | N         | 3        | O   | I     | Y    | \$999     | \$149     |
| FirstClass            | SoftArc, Inc                  | 416-299-4723 | 416-754-1856  | 416-609-2250 | MAC      | 100   | 22         | OS          | Y         | 3        | O   | I     | Y    | \$3450    | \$95      |
| GAP                   | GAP Development Co            | 714-496-3774 | 714-496-3774  | 714-496-3819 | DOS      | 100   | 16         | DV          | Y         | 3        | I   | Y     | Y    | \$359     | \$79      |
| Hermes II             | Computer Classifieds          | 206-643-2316 | 206-643-7830  | 206-643-2874 | MAC      | 10    | 10         | OS          | Y         | 3        | I   | Y     | Y    | \$95      | \$95      |
| hi-BBS                | XBR Communication             | 514-489-1001 | 514-489-4966  | 514-489-0445 | MAC      | 130   | ?          | OS          | Y         | N        | O   | N     | Y    | \$3400    | \$70      |
| Kitten                | TelPro Technologies           | 804-442-5865 |               | 804-442-5867 | DOS/OS2  | 999   | ?          | OS          | Y         | 3        | O   | N     | Y    | \$195     | \$195     |
| Magnum BBS            | Gilmore Systems               | 805-379-3210 | 805-379-1341  | 805-379-3450 | OS/2     | Unlim | 32         | OS          | Y         | N        | I   | N     | Y    | \$75      | \$75      |
| MEGAHOST              | ASCII Computer Enterprises    |              |               | 209-836-2402 | DOS      | 10    | 8          | DV          | Y         | 3        | I   | N     | Y    | \$49      | \$49      |
| Multi-Net             | Multi-Net Communications      | 503-883-8099 | 503-883-7879  | 503-883-8197 | OS2      | 999   | 12         | OS          | Y         | N        | I   | N     | Y    | \$195     | \$195     |
| Novalink Professional | ResNova Software Inc          | 714-379-9000 | 714-379-9014  | 714-379-9004 | MAC      | Unlim | 40         | OS          | Y         | 3        | I   | N     | Y    | \$300     | \$300     |
| OPUS-CBCS             |                               | 214-528-4887 |               | 214-528-4943 | DOS      | 255   | 1          | DV          | Y         | 3        | I   | N     | Y    | ?         | ?         |
| PCBoard               | Clark Development, Inc        | 801-261-1686 | 301-261-8987  | 801-261-8976 | DOS      | 1000+ | 16         | DV          | N         | I        | 3   | N     | Y    | Free      | Free      |
| PowerBBS              | Power Computing               | 516-938-0506 |               | 516-822-7396 | Windows  | Unlim | 9          | OS          | N         | 3        | I   | 3     | Y    | \$10000   | \$170     |
| Powerboard BBS        | NUJQ Software, Inc            | 800-844-6526 | 914-834-0185  | 914-834-7830 | DOS      | 999   | 8          | DV          | Y         | I        | I   | N     | Y    | \$189     | \$99      |
| ProBoard              | ProBoard International        | 612-537-8655 | 612-537-8613  | 612-537-8659 | DOS      | 255   | 8          | DV          | Y         | I        | I   | Y     | Y    | \$249     | \$99      |
| ProLine               | Morgan Davis group            | 619-670-0563 | 619-670-9643  | 619-670-5379 | APPLE II | 1     | 1          | -           | Y         | I        | I   | N     | Y    | \$49      | \$49      |
| RATsoft ST            | ROdent Laboratories Software  |              |               | 801-756-2901 | ATARI    | ?     | ?          | -           | Y         | I        | I   | N     | N    | \$159.95  | \$159.95  |
| RemoteAccess          | Wantree                       | 913-441-1336 | 913-441-0596  | 913-441-0595 | DOS      | 250   | 1          | DV          | Y         | 3        | -   | N     | Y    | \$529     | \$149     |
| RoboBoard/FX          | Hamilton TeleGraphics         | 800-363-7626 | 819-682-7771  | 819-682-7771 | DOS      | 255   | 8          | DV          | Y         | O        | N   | Y     | Y    | \$400     | \$95      |
| RyBBS                 | The Ryco Company              | 414-962-5967 | 414-962-1097  | 414-962-1097 | DOS      | 9     | 4          | DV          | Y         | O        | N   | Y     | Y    | \$175     | \$75      |
| Sapphire              | Pinnacle Software             | 514-345-9578 | 514-345-8644  | 514-345-8654 | DOS      | 1     | 1          | -           | N         | N        | N   | Y     | Y    | \$45      | \$45      |
| Searchlight BBS       | Searchlight Software          | 216-631-9290 | 216-631-9289  | 216-631-9285 | DOS      | Unlim | 10         | DV          | Y         | I        | 3   | 3     | Y    | \$399     | \$99      |
| Second Sight Software | FreeSoft Co.                  | 412-846-2700 |               | 412-846-5312 | MAC      | 2     | 2          | OS          | Y         | 3        | I   | N     | Y    | ?         | ?         |
| SpiritFire BBS        | Buffalo Creek Software        | 515-225-9552 |               | 515-225-8496 | DOS      | 255   | 1          | DV          | Y         | 3        | I   | N     | Y    | \$85      | \$85      |
| Synchronet            | Digital Dynamics              | 714-529-6328 | 714-529-9721  | 714-529-5313 | DOS      | 250   | 10         | DV          | Y         | 3        | I   | N     | Y    | \$399     | \$99      |
| TBBS                  | eSoft, Inc                    | 303-699-6565 | 303-699-6872  | 303-699-8222 | DOS      | -     | 64         | I           | N         | O        | 3   | I     | Y    | \$1995    | \$295     |
| TEAMate               | VMB Development Corp          | 310-318-1322 | 310-318-82762 | 310-318-5302 | UNIX     | Unlim | -          | OS          | Y         | O        | O   | N     | Y    | \$125000  | \$2000    |
| Telefinder            | Spider Island Software        | 714-669-9260 | 714-669-1383  | 714-730-5785 | MAC      | 200   | 20         | OS          | Y         | 3        | O   | N     | Y    | \$2000    | \$425     |
| The Major BBS         | Galacticomm, Inc.             | 305-583-5990 | 305-583-7846  | 305-583-7808 | DOS      | 256   | 256        | DV          | Y         | 3        | O   | Y     | Y    | \$10717   | \$259     |
| TinyHost              | Bruce Krobusek                | 716-924-8284 | 716-924-4193  | 716-924-4193 | DOS      | 1     | 1          | DV          | Y         | N        | N   | N     | Y    | \$25      | \$25      |
| TriBBS                | TriSoft                       | 615-327-3670 | 615-327-3670  | 615-327-3670 | DOS      | 255   | 4          | DV          | Y         | O        | 3   | O     | Y    | \$75      | \$75      |
| TSX-BBS               | S&H Computer Systems Inc      | 303-444-7071 | 303-444-0035  | 303-642-7463 | DOS      | Unlim | 256        | I           | Y         | O        | I   | O     | Y    | \$300     | \$300     |
| UltraBBS              | CDB Systems, Inc              | 616-399-8934 | 616-399-8934  | 616-399-4818 | DOS/OS2  | 1024  | 16         | DV          | Y         | I        | I   | Y     | Y    | \$75      | \$75      |
| Virtual BBS           | Virtual ComTech Int, Inc      | 805-873-2500 | 805-873-2599  | 805-873-2400 | DOS      | 250   | 8          | DV          | Y         | I        | I   | O     | Y    | \$999     | \$99      |
| Wildcat!              | Mustang Software, Inc.        | 210-631-6090 |               | 210-631-5841 | DOS      | 999   | 8          | DV          | Y         | 3        | I   | Y     | Y    | \$799     | \$129     |
| WWIV                  | WWIV Software Services        |              | 315-635-1908  |              | UNIX     | Unlim | -          | OS          | Y         | 3        | I   | Y     | Y    | \$80      | \$80      |
| ZMax XChange          | ZIMax Computer Solutions, Inc |              |               |              |          |       |            |             |           |          |     |       |      | \$695     | \$695     |

Y = YES

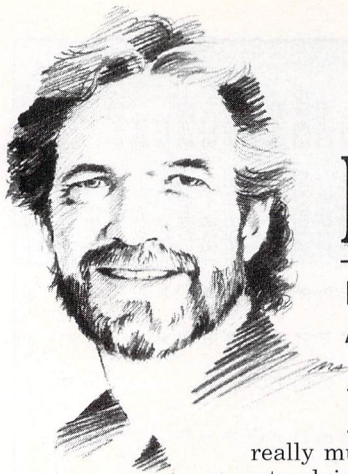
N = NO

I = INTERNAL

O = OPTIONAL

3 = THIRD PARTY





# PRODIGY

by Ric Manning

## NEW HOMEWORK HELPER OFFERS LOTS OF SOURCES AND EASY SEARCHING

Prodigy is calling its new reference service a homework helper, but it's really much more than that. The new database accepts plain English queries and delivers full-text clips from hundreds of publications. Nexis and Dialog should work like that.

Ric Manning writes about computers and technology for *The Courier-Journal* in Louisville, KY. His weekly column on consumer electronics is syndicated through the *Gannett News Service*. Ric reads his e-mail at [ricman@iglou.com](mailto:ricman@iglou.com) on the Internet, and **USJM92A** on Prodigy.

Joshua Koppelman of Infonautics, the company that developed the Family Reference Library, said the source material includes more than 100 newspapers and wire services, 400 magazines, from *Boys Life* to *Scientific American*, and other published sources such as *Monarch Notes*.

"We worked with librarians to find the best sources for junior and senior high students," Koppelman said.

In addition to text, the database also includes photos and other graphics, all of which, he said, can be used in school papers without worrying about copyright rules.

The database has a sophisticated search engine, which can accept a query such as "Is there a cure for AIDS?" Users can narrow their searches by choosing broad topics and groups of sources. The search returns 50 citations, ranked according to relevance. Hit the Download button and the service tells you how long it will take to transfer the file.

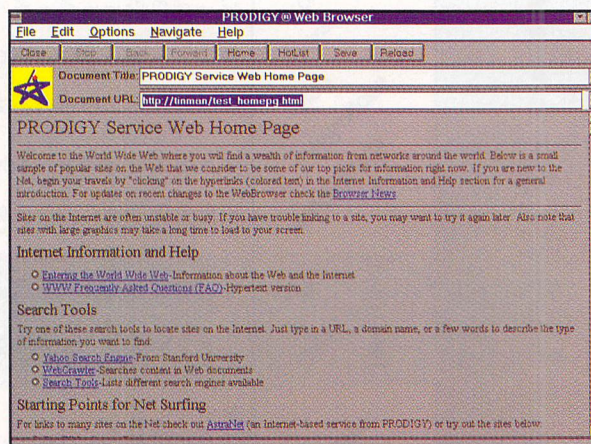
Koppelman said Infonautics chose Prodigy to be the home for the reference library because "it's the family service and more kids use it than the others." Besides, he added, "they've got a lot of subscribers."

### WEBBROWSER IN TEST MODE

Prodigy's programmers appeared to have most of the wrinkles ironed out of its Internet link to the World Wide Web by the end of 1994. The new WebBrowser feature may be completely online by the time you're reading this.

The browser looks a lot like Mosaic or Netscape, the Windows and Mac tools that Internet subscribers use to surf the Net with SLIP access through campus or independent Internet providers. The interface includes lines to enter and display URLs and a row of button bars to aid navigation. And the test version that I tried seemed to be just as fast - running through Prodigy at 9600 bps - as my local Net link that runs at 14.4 Kbps.

One reason for WebBrowser's snappy performance is it brings in the text from a Web page before it reads the graphics. Prodigy said the WebBrowser will also

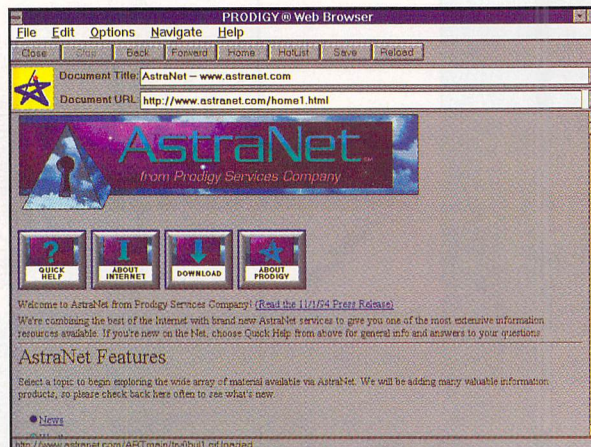


### Prodigy's WebBrowser

include a search engine to help users find pages without typing in complex URL addresses and the ability to create personalized Hot Lists of Web sites.

Although Prodigy's WebBrowser will give subscribers full access to the Web, it will also be a key link between Prodigy's audience and new Web-based services developed through Prodigy's independent service called AstraNet. AstraNet will co-develop services with Prodigy's divisions and third-party providers.

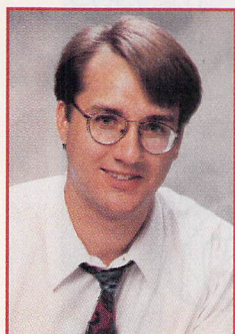
Prodigy announced in December that when it officially rolls out Web access early this year, it will not come with an additional charge. Users will be able to download the Windows enhancement software that supports Web access at no extra charge.



### Astra-Net - Prodigy's link between subscribers and Web Services



# NEW PCBoard. Version 15.2 offers Internet Gateway, Full Credit Accounting, Windows E-mail, dBASE File Access, Internal QWK, FIDO Mailer and more sensational benefits, all as "standard equipment" the other guys make you pay through the nose for, or don't even offer... And now you can try PCBoard for FREE



*"I promised to offer the best value in Host Information Systems Software, and our new PCBoard Version 15.2 delivers big time, with at least 8 FREE, essential operating functions the competition charges you for or doesn't even have!"*

Steve Klingler,  
VP/General Manager  
Clark Development Co.

By Jim Ackerman

Why is PCBoard the most widely used BBS software on the market today... used by 23 of the top 100 boards, including Software Creations, voted top BBS the last two years... and the only commercial BBS software *ever*, to win *PC Magazine's* prestigious... *Editor's Choice Award*!

The reason is unmatched *flexibility* and *adaptability*.

And now, with the release of the new 15.2 version, PCBoard is such a superior value, you can classify it in a league of its own.

You get more connectivity, accountability, and ease-of-use, because PCBoard gives you more standard functions than anyone else. The new 15.2 dramatically increases your system capabilities, and reduces your need for costly add-ons.

As a result, you can use PCBoard regardless of the size of your board, and regardless of growth or other changes that may take place in the services you offer, the hardware you run or custom add-ons you employ.

## Who wouldn't want these 8 essentials the competition considers options you must buy

1 Why should you be charged extra for such an essential function as an Internet Gateway? *You shouldn't!* So, it's part of the standard package automatically built-in to PCBoard 15.2. Most other BBS manufacturers charge you for it... *some charge more than their regular, standard package.*

2 Credit Accounting... surely the ultimate essential. PCBoard doesn't make you pay extra for things you *must* have. With the new Credit Accounting function, you can charge or reward the user for each activity and decide the charges for each; Operate on pre-pay or pay-as-you-go terms; Track in any kind of local currency you choose, or as credit units. And set your own peak times, including holidays. Again, maximum flexibility!

3 Everyone on your network can now easily use the new, fully integrated Windows E-Mail application, PCBoardMail. No gateway needed because PCBoardMail uses

the PCBoard configuration and data files directly.

4 You won't need a costly front end to add Fido access to your board. It's already part of PCBoard 15.2. Out of the box, your users can do the "Fido thing" right from your PCBoard message bases.

5 Built-in QWK makes you popular with your users. And 15.2's QWK now includes Net Status and File attachments. What a time and money-saver!

6 Now, unleash the power of dBASE III and Database Access, with on-line applications created with the award winning PCBoard Programming Language (PPLC).

7 Your BBS can truly go worldwide with Multi-lingual capabilities. PCBoard 15.2 gives them to you, including support for 2 byte and reverse printing international character set.

8 If you're ready for RIPscript Graphics, registered PCBoard customers download PCBoard's RIPKit FREE, so your remote callers can choose between ANSI, ASCII and RIP, on your BBS. This out-of-the-box capability presents the caller with a true GUI interface, complete with graphics, icons and mouseable point-and-click menus. Once again, maximum flexibility and adaptability for you and your users.

## But wait... there's more

We've only scratched the surface. There's literally not enough space to cover it all here.

Like...you can use the same newsgroup names as the Internet on PCBoard because 15.2 supports conference names up to 60 characters long.

Save amazing amounts of time with our new, Automated, Rules-based File Maintenance Utility. Plus... local logins, 19 FREE PCBoard utilities, and even FREE support for MultiPort hardware, all "standard equipment" on PCBoard version 15.2.

## How can they do all that... and without raising the price to boot

PCBoard was designed with an open architecture, so flexibility, adaptability, reliability and stability were built-in at the start. That's why PCBoard can offer all of this functionality... all of this power... all of this value!

And even with all of these new benefits, the price hasn't changed. Begin as small as one or 2 lines for \$150.00, and grow all you want. *Only PCBoard supports up to 1,000+ dial-in or local access nodes.*

It's the perfect solution for the 1-line hobbyist to the Fortune 500 international corporate E-mail application.

Maybe that's why PCBoard has more installations than any other BBS system software.

## Who else gives you FREE Upgrades for a year... FREE telephone voice support for 12 months... FREE BBS support for life... and instantly installs as an upgrade from your FREE demo

NOBODY does it all... and only PCBoard installs as an upgrade from your demo. Just imagine the time and headache you'll save, not having to set your entire system up twice! Once you try our demo, give it a complete shakedown, and decide PCBoard is for you, simply install your full program upgrade and instantly be operating without skipping a beat.

And don't forget... from the time you get your demo, we're behind you all the way. Customers get any improvements we make — FREE for a full year. Need tech support? Our "live-on-the-phone" support staff talks you through your questions. It's FREE! And for as long as you're a PCBoard sysop, you can count on FREE online support through our Salt Air BBS.



## Get your FREE DEMO and a lot more

Get your FREE Demo online 24 hours a day. The phone number is **801 261-8976**. Enter DEMO ACCOUNT as your login name to bypass the usual registration process and get online quickly.

Or call us at **800 356-1686** (or **801 261-1686**) and we'll ship you a complete introductory kit, including FREE demo, comprehensive brochure, & special new... *Guide To Setting Up Your Own BBS.*

When you actually order by phone, and give the code from this ad, we'll also include a special 4 tape audio program from two nationally renowned direct marketers, to help you quickly and easily spread the word about your BBS, whether you're a hobbyist, or you see cyberspace dollar signs in your future. It's a \$47.77 value.

Naturally, our program is guaranteed for a full month. If you buy and then decide PCBoard isn't for you within 30 days, simply return the package for a complete refund. But keep the 4-tape audio program as a FREE gift from us, just for trying PCBoard.

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For online demo users or new registrations: Baud rates up to 28,800 bps, no parity, 8 data bits, 1 stop bit. ASCII, ANSI, and RIP Graphics are all supported. We'll even let you download a copy of RIP Term, if you aren't already compatible.

CODE: BWM1



## FASTER ACCESS COMING

Although Prodigy's WebBrowser appeared to work quite well at 9600 bps, Prodigy knows that a full appreciation of the Web requires high-speed access. The service announced late last year that it would speed up efforts to upgrade all of its access nodes to 14.4 Kbps.

By the end of December, Prodigy had 44 nodes running at 14.4 Kbps. Here's a list of a few of the new high-speed sites:

|                  |               |
|------------------|---------------|
| Manhattan        | (212)791-5232 |
| Portland         | (503)227-1574 |
| Dallas           | (214)761-5511 |
| Seattle          | (206)292-3969 |
| Atlanta          | (404)705-3800 |
| Los Angeles area | (213)478-8050 |

## MORE NEWSPAPERS JOIN PRODIGY

The Spokesman-Review of Spokane, Washington, and the Richmond Times-Dispatch have both announced plans to make electronic editions available on Prodigy.

The Spokane paper said it and Prodigy will build a regional online service serving eastern Washington, northern Idaho and parts of Oregon and Montana. The service will be available this spring as a "Custom Choice" premium service to Prodigy members.

The Times-Dispatch's service, called Gateway Virginia, is scheduled to arrive this summer. Executives of the newspaper company said they want to use the service to provide bulletin boards and electronic mail to subscribers in the Richmond area and to deliver color photos and sound with editorial content. Prodigy and the newspaper company also said they will work together to develop editorial content to be published on the Internet.

Other newspapers on Prodigy include the Dallas Morning News, Los Angeles Times, Atlanta Journal-Constitution, Tampa Tribune and Newsday. The Milwaukee Journal-Sentinel and Providence Journal-Bulletin are also planning to debut on Prodigy early this year.

## FOCUS GROUPS TO USE PRODIGY CHAT

Prodigy has begun marketing its chat service as a way for market researchers to conduct online focus groups. The network said it is offering the service to advertisers, market researchers and

product managers. The \$3,000 fee covers recruiting participants, scheduling sessions through e-mail, and creating rooms to accommodate as many participants as needed.

"We're getting a lot of calls as marketers discover live chat on their own and want to adopt it as a method of research," Paul Lewis, Prodigy's research manager said in a company press release. "Also, many people are likely to reveal more intimate details in a group if they're not face to face."

## BUONGIORNO E BONJOUR!

"Vol parle francese e italiano con me? Je parle francais, et je veux apprendre l'italiano."

Candice Coghill used Prodigy's Language Bulletin Board to find a pen pal who would help her polish up her French and Italian. "I would love to talk to anyone who speaks or reads French and who would enjoy helping me expand my slight knowledge of Italian," she said. "It would be especially useful if we could meet on Chat and carry on a dialogue."

The language BB, which was started last year, gives users a place to write in their native tongues or to work on an adopted language. A couple of transplanted Swedes used the board recently to find each other. A woman in Florida used the BB to recruit someone who could converse in Hebrew with her Israeli-born husband. And Russian high school students used the board to find native Russians to talk to.

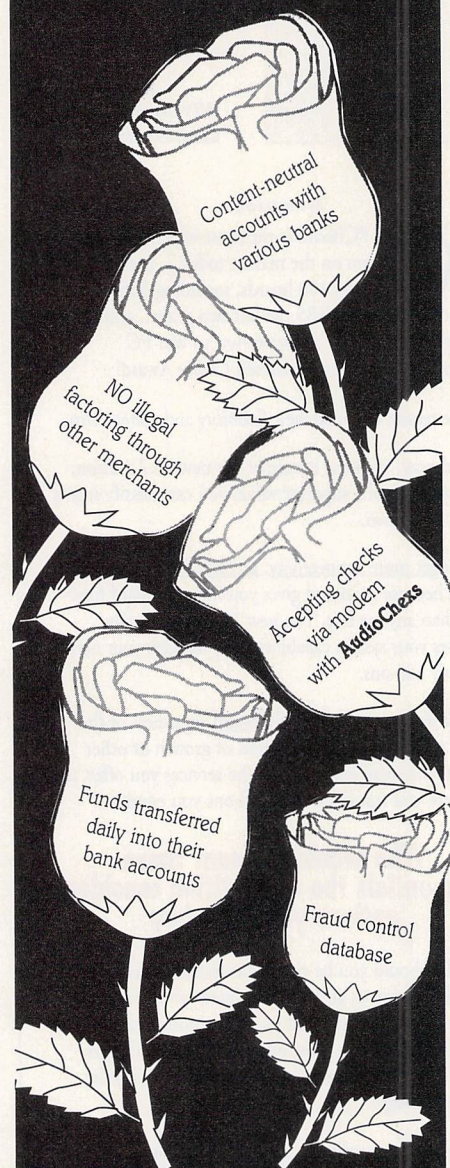
Prodigy recently hooked up with Berlitz International Inc. to help supervise the boards. Maria Ventrudo said her role is to answer questions and help BB users. But she also hinted that online language instruction programs is a possibility in the future.

Languages represented on the board include: African, Arabic, Celtic languages, Danish, Dutch, Esperanto, Finnish, French, German Greek, Hebrew, Hindi, Hungarian, Italian, Japanese, Korean, Latin, Native American, Norwegian, Philipino, Polish, Portugese, Russian, Spanish, Swedish, Thai and Ukrainian. ♦

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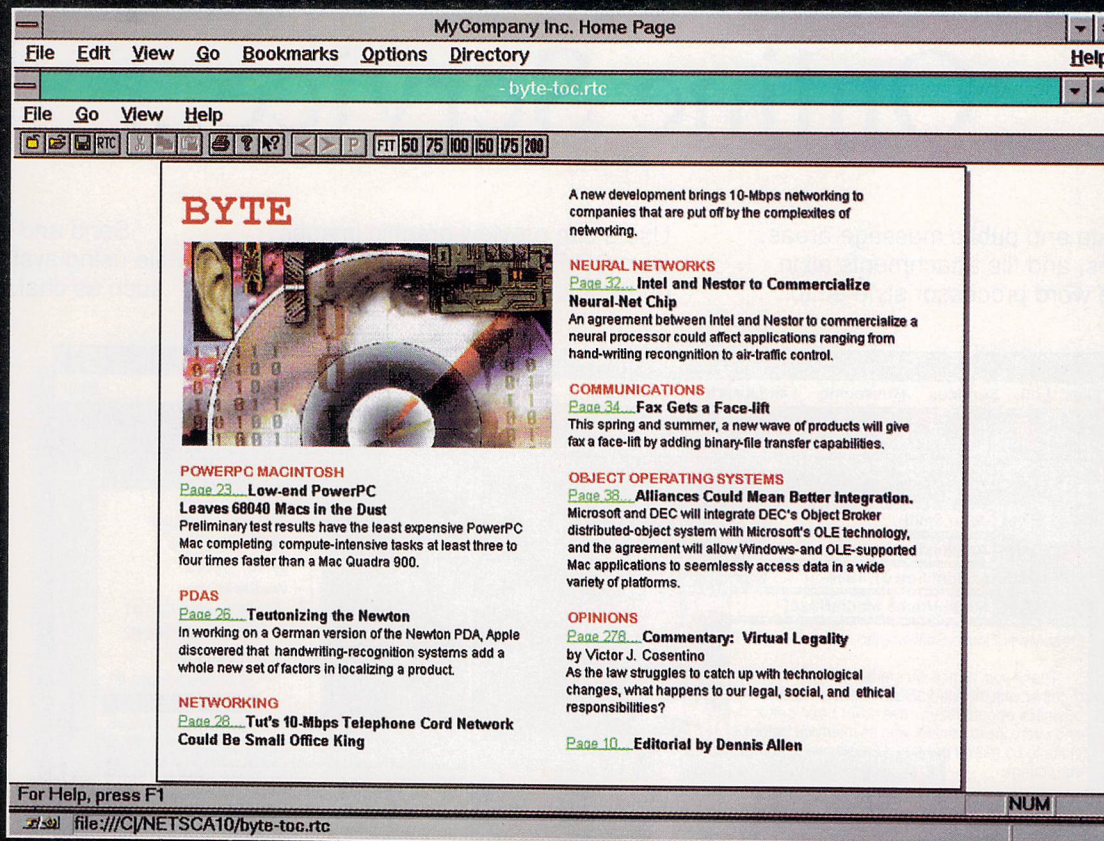
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CARD SYSTEMS INC.

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Santa Rosa, CA & Humboldt Bank, Eureka, CA





# .RTC



RTC File captured running under Netscape 1.0

## HOME PAGES FOR WEB, BBS, 'ZINES

RTC (Compressed RTF) offers *high speed*, image-rich documents to your callers *in real time* (Files average 10-20k and transfer in seconds via 28.8). Use RTC for Home Pages on a BBS, or to enrich the WEB page format with links to a *true magazine format* suitable for publications and product catalogs.

## IMAGEN RELEASES REAL TIMES V2.0

REAL TIMES (Fracterm 2.0) works with any BBS to display hyperlinked pages in beautiful, mouse-driven graphics mode. Sysops receive a distributable customized Window viewer, that includes RTC compression for use by their callers. Documents are made up easily as RTF files in word processors, and may be posted on BBS's, WEB or WAIS servers with little alteration.

## DEVELOPER INQUIRIES INVITED

RTC is a dedicated communications file format, that can bring speed, beauty and richness to your application. Files are not scanned and remain readable, searchable and convertible back to RTF. Talk to us about DLL's and objects for binary fax, wireless docs, newspapers etc. and see why RTC is the communications file format of the future!

# IMAGEN

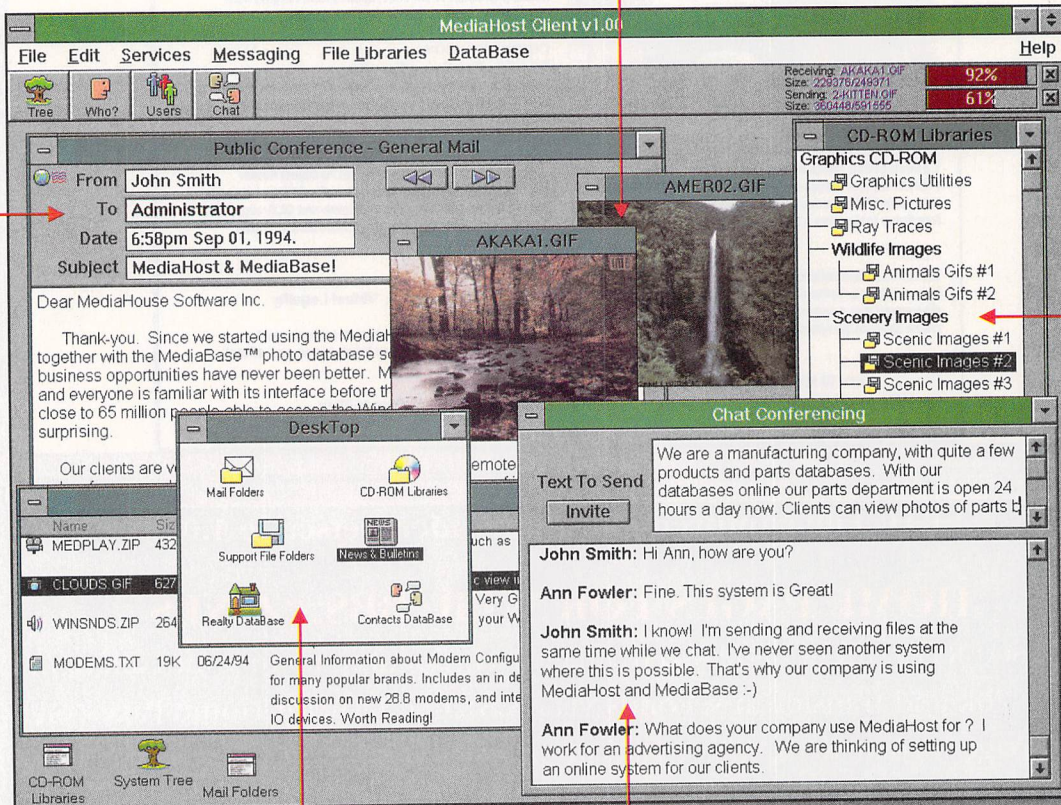


# So You Need to Setup an Online Service...

E-MAIL - Private and public message areas, user mail boxes, and file attachments all in an easy to use word processor style editor.

Users can preview graphic images from CD-ROM, hard drive or any other mountable volume.

Send and receive files while using system features such as chat, and e-mail.



Menus, templates and screens can be easily customized to suit your application requirements using the MediaHost Visual Designers.

Multi-user chat with Clipboard support and scroll back.

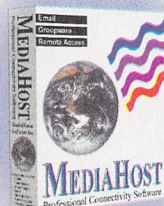
Support for Push Button, Floating Icon, Item List, and Tree List menus.

## MEDIAHOST

Online Server for Windows™

MediaHouse Software Inc.  
32 Eardley Road,  
Aylmer, Quebec,  
Canada J9H 7A3

Sales & Info 819-682-9737  
Demo System 819-682-3330  
Fax 819-685-0994



Starting at \$195

- E-mail with private mail boxes and public conferences.
- BBS style File Folders with CD-ROM support.
- Private and group chat.
- Online image previews and photographs.
- Receive and send files concurrently.
- Corrects for line noise.
- Free Client software.
- Includes visual design tools.
- Configurable menu structure.
- Definable security.
- Ordering and sales interface.

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Coming  
Soon!

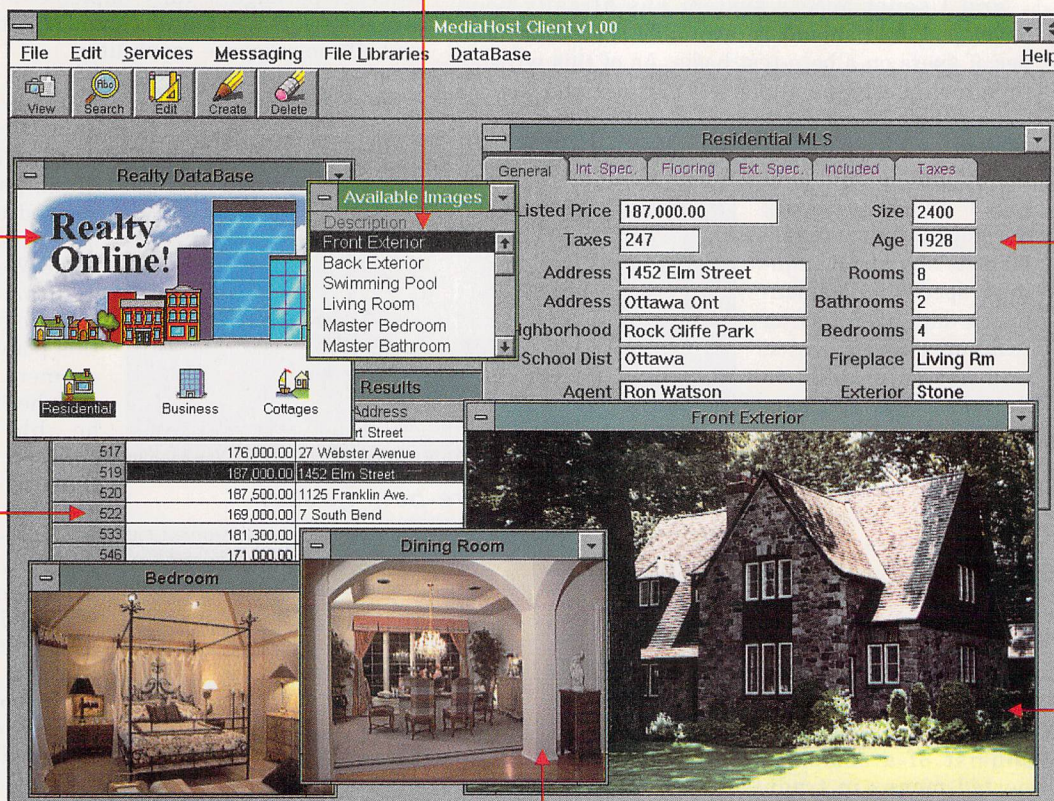


# ...and You Want to Put Your Databases Online.

Custom database menus are easily created in the MediaHost Visual Designers and Icon Editor.

Up to fifteen images or text files can be displayed for each record in the database. MediaBase also supports memo fields.

Custom templates can be created to display database records. You decide what fields your clients can view.



Databases and query results are displayed in a spreadsheet view which is used to quickly browse through records.

Images are sent seamlessly in the background using the MediaHost bi-directional protocol.

MediaBase offers support for multiple high quality 24 bit images, for each record in the database.

## MEDIABASE

Database Option for MediaHost

### MediaHouse Software Inc.

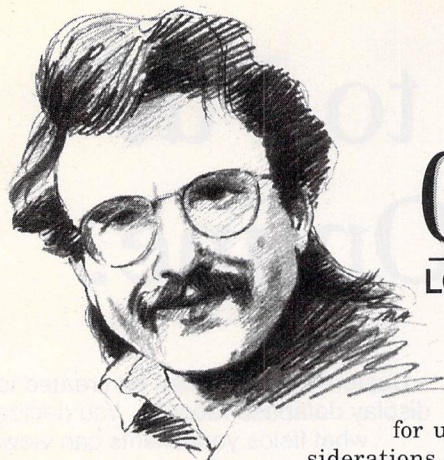
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- Reads/writes dBASE®, FoxPro® and Clipper® files.
- Can display JPEG, CMP, TIFF and GIF™ images.
- Allows multiple image and document files per entry.
- Allows security based entry and editing of records.
- Background searches allows viewing of data as it is found.
- Intuitive spreadsheet view.
- Supports multiple databases.
- Configurable spread sheets, templates and queries.
- Configurable multi-key searches.
- Integrates with MediaHost ordering interface.





# GENIE by Lenny Bailes

## LOOKING INTO GENIE

Lenny Bailes is a PC consultant, writer and teacher living in the San Francisco Bay Area. He is a contributing editor for Microtimes, a California computing magazine, and co-author of Byte's DOS Programmer's Cookbook.

GENIE is gradually inching closer to its goal of providing full Internet access for users as soon as technical considerations permit. A text-based Gopher and Usenet access system has already been developed, and should be available soon to a number of users on a beta-test basis. As of this writing, in late January, the alpha-test phase of the Gopher utility has been completed. FTP, Archie, WAIS and other services are also being developed, but management is shy about naming a specific implementation date after having jumped the gun once and not being able to deliver promised services on time.

GENIE Internet sysop Andy Finkendstadt was able to provide me with a series of captured screens from an online GENIE gopher session that indicate how the system will shortly be set up for beta testers. The GENIE gopher will consist of a series of nested menus in traditional format, accessible through any standard text-based terminal emulation. VT100 and ANSI users will see a color-coded screen of menu options. Eventually, the GENIE gopher will also be accessible through Windows and Macintosh graphic front ends, but it should be available, at least in character-based form sometime in early Spring.

The top level of the gopher is dedicated to GENIE-specific services, offering information about GENIE services and pointers to specific roundtables. The InfoSurf option provides additional access to a series of reference tools, electronic journals, and a tree connection to other Gopher systems. The Subject Collections option opens into a series of menu choices for Arts, Humanities, Sciences, and Ethnic, Gender and Area Studies collections. An

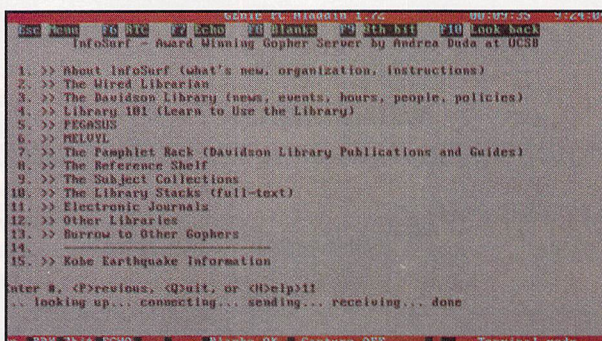
extensive set of submenus has been configured to provide access to a wide selection of databases and other information sources. The Usenet news option permits newsgroups to be accessed from a number of national and international servers. (When the Internet package is fully implemented, GENIE will also offer a dedicated newsreader with both online and offline response capabilities.)

Another piece of good news for GENIE users is that the Internet plans have now been revised to include the offering of a World Wide Web browser in addition to the other planned services. At this point GENIE management hasn't decided whether users will be able to purchase SLIP or PPP connections as part of their accounts. The most likely scenario is that GENIE will implement some variety of SLIP emulation, such as TIA, on their ordinary dial-up accounts. Some sort of graphic Web access will be provided by the end of 1995, either through a proprietary Web browser, or one of the existing third-party products.

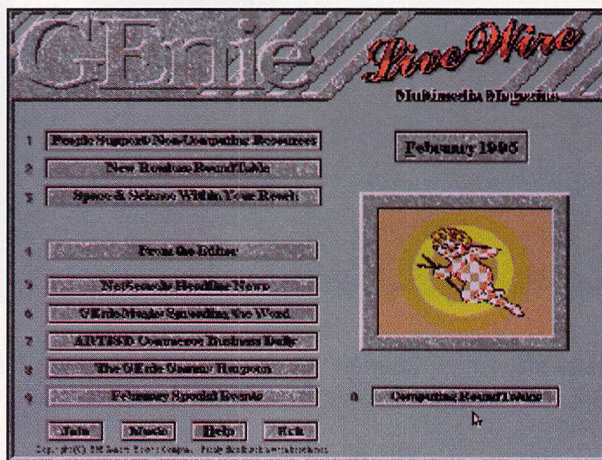
GENIE provides a number of online reference tools without actually leaving its basic service domain.

The GENIE Research and Reference Services (page 302) lists a series of premium services that charge a fixed fee per search through various online databases. Your mileage in using the GENIE premium services may vary. I found that the GENIE Bookshelf seems to be able to do a good job of tracking down obscure out-of-print titles by author and publisher. One user discovered, last month, that the "Quotations Online" database had no author entries for either the Greek playwright Sappho, or for Theodore Roosevelt.

GENIE also offers online reference tools that can be accessed with no surplus search or connect charges.



GENIE's pre-beta gopher



February Livewire

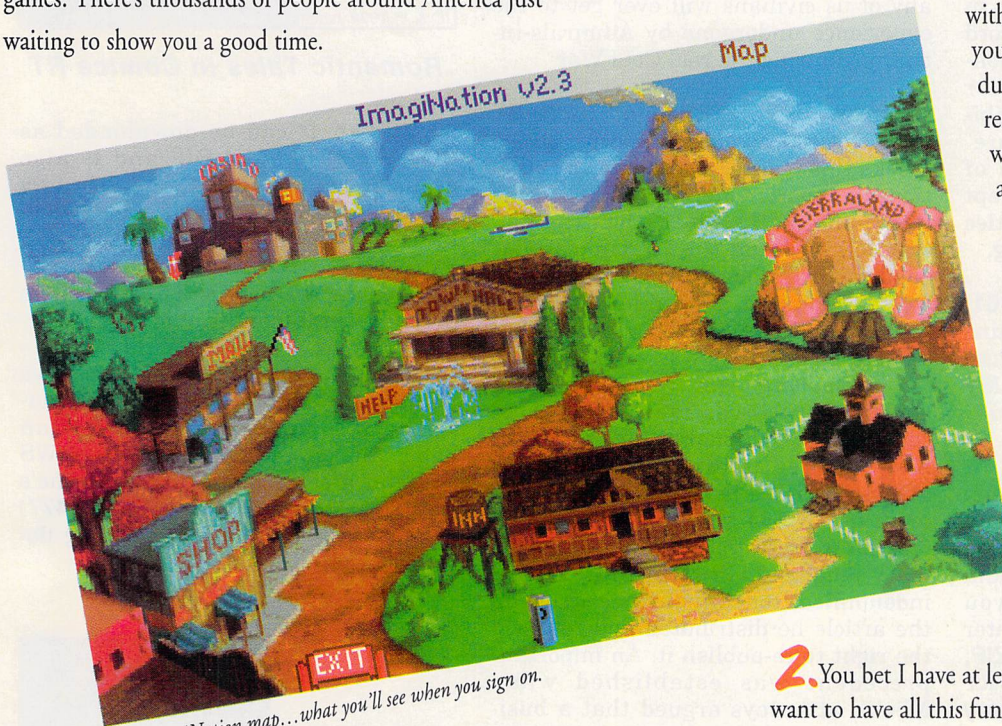


# Bulletin Bored?

## Discover a new world!

Are you ready for a break from the world of text-based screens and downloading? Sure it's fun to be on a BBS, but what do you do for entertainment? Since you already have a computer and a modem, why not try The ImagiNation Network, a unique on-line entertainment experience.

With ImagiNation, you can meet friends, have fun and play games. There's thousands of people around America just waiting to show you a good time.



## Entertainment, fun and friends...

ImagiNation has the classic board and card games we all grew up with, like bridge, chess, and hearts. But that's only the beginning. Spend time with a noted actor or writer in one of our regular forums. (It's your chance to ask that burning question the talk show host forgot.) Attend classes at our University. Meet new friends you didn't know you had when you share your interests and hobbies.

## Start Exploring Your Own ImagiNation With 5 FREE Hours!

### Here's What You Get...

1. A Starter Kit in the mail, usually less than a week after your request. But don't delay. Call now!
2. A brand new membership with 5 free hours of network time to use within the first 30 days to get acquainted with new friends. After you use your free hours, you'll be billed at a rate of \$3.50 per hour during the first month. Each month you remain a member, you'll be billed just \$9.95 which includes 5 free hours; additional hours are billed \$3.50 each.
3. A free subscription to *Imaginations*, the members-only full color newsletter that highlights coming attractions and features profiles of members and on-line celebrities.

### Here's All You Need...

1. I have at least a 386sx or better with a hard drive and 4MB RAM. I also have VGA graphics and a Microsoft-compatible mouse.
2. You bet I have at least a 2400 baud modem. You think I want to have all this fun by myself?
3. To use ImagiNation requires a major credit card. I have one!
4. ImagiNation. Of course I have that. Are you crazy?

And if you need help installing The ImagiNation Network software, or using it, just give us a call.

# IMAGINATION!

## 1-800-IMAGIN-1

(1-800-462-4461)



In addition to Grolier's Encyclopedia, users can also take advantage of the Newsbytes News Network, Science Center Index, CIA World Fact Book, and GENie Weather Center.

NewsBytes is a computer news/clipping service that tracks events and product announcements within the computer industry. It allows you to review headlines from recent NewsBytes editions or to search for stories by Bureau, Subject and Story type. Newsbytes can be handy for rounding up information on late-breaking computer industry events and also contains an extensive photograph library.

The GENie Science Center Index (**Page 461, Option 7**) contains references to over 6,400 articles published in 26 annual journals since 1984. It can be used to track down technical articles in a variety of fields by entering keyword search strings. A brief trial run I conducted yielded two story-entries for nanotechnology, 15 articles on antibiotics, and 18 stories on "architecture" (including one called "Genetics of Atherosclerosis" that somehow crept into the list). Many of the listed titles are online and available for browsing.

The CIA World Factbook (**Page 461, Option 8**) is an almanac that contains articles, maps and JPG pictures taken directly from the paper edition. My random search on "Mozambique" turned up 15 title articles.

The GENie Weather Center (**Page 462**) offers weather summaries, maps and forecasts for select cities around the globe. A downloading script for Aladdin (GENie's offline front end) lets you automatically request Weather Center information. Look for **WXCENTER.ZIP**, file **6473** in the Space & Science RT Software Library (**Page 461, Library 11**).

A new military strategy game from KESMAI is a cut above this company's



**KESMAI's Harpoon**  
- Naval Warfare Online

recent run of "shoot and loot" productions. Harpoon is a naval warfare simulation much like the complex board games published by the Avalon-Hill game company. Harpoon is based on an original board game designed by Naval Officer Larry Bond. The first computer version inspired Tom Clancy's novel "The Hunt for Red October." The GENie version of Harpoon offers a complex simulation of a NATO/Warsaw Pact conflict occurring back in that parallel universe where the Soviet Union is a dangerous, monolithic military threat. Individuals or teams of players can command either side of the conflict against one another or against the computer. The game requires a VGA graphic front end that can be downloaded from KESMAI (**Page 855**). Both the graphics and game design of this version are impressive - it's the closest any of us civilians will ever get to the experience undergone by Admirals-in-training during the real Cold War.

The LAW, INTERNET, and USA EAST RTs featured a conference with Brock Meeks this month, a well-known investigative reporter and straight-shooting telecomm gadfly. Meeks has the distinction of being the first journalist sued for libel for material distributed over the Internet. Known for his courageous reporting from various global troublespots, Meeks was sued last year for reporting the facts about a Government investigation into one company's questionable Internet business practices. In this online interview, Meeks describes how he made a settlement to pay \$64 of the plaintiff's filing fees after his attorneys filed for summary judgment. In return Meeks was indemnified from any further action on the article he distributed and retained the right to re-publish it. An important precedent was established when Meeks' attorneys argued that a business user of the Internet can be classed, for purposes of the libel statutes, as a "public official" with the same access to the "media" as the journalist who comments on his business practices.

In honor of Valentine's Day, the Comics RT (**Page 1320**) featured Romantic Tales, a comic book from Caliber Press. Drawn in the Love And Rockets style, this is actually pretty funny and worth



### Romantic Tales in Comics RT

looking at. It can be downloaded as **ROTAL0 - ROTAL4.GIF** and is also available in JPG format. The February featured author in the GENie Readers RT is John Berendt, whose **MIDNIGHT IN THE GARDEN OF GOOD AND EVIL** made the non-fiction best sellers list for several months. For those interested in the issue of "Windows 95 - threat or menace," the WinNews Roundtable (**Page 95**) offers the transcript of a conference with Adrian King, author of **INSIDE WINDOWS 95**. And also in honor of Valentine's Day, the Multimedia RT (**Page 1477**) has posted a series of eye-catching floral scans. ♦





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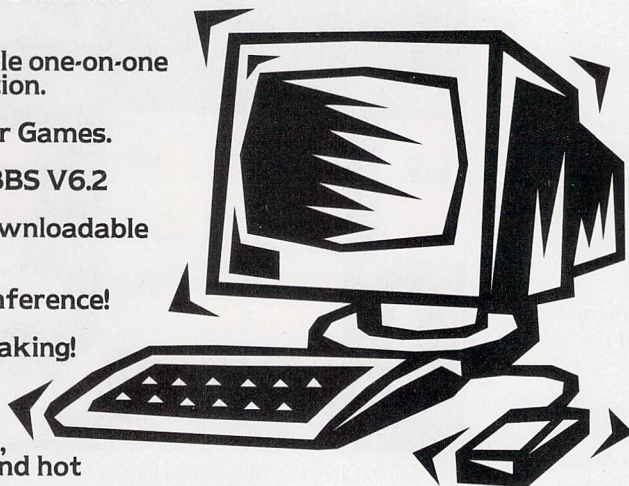
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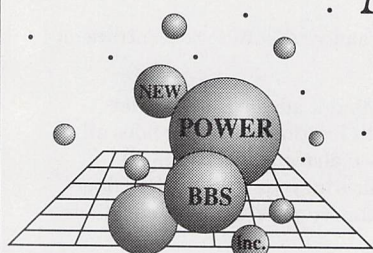
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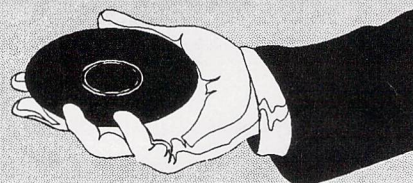
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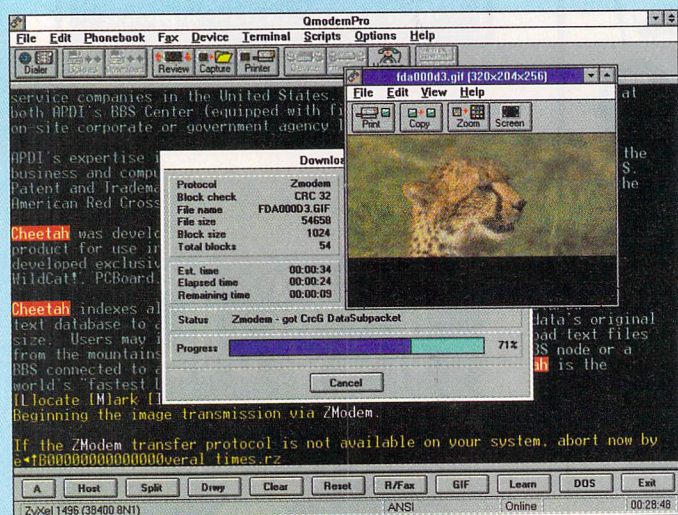
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Mark Burnett at APDI's BBS Service Bureau



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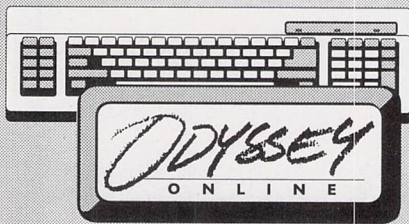
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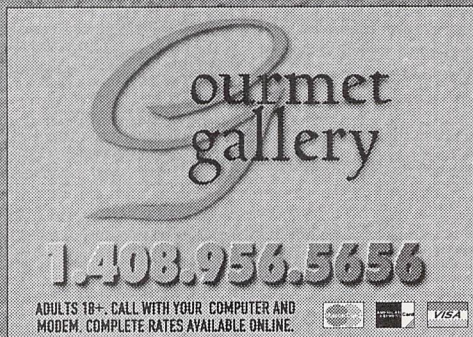
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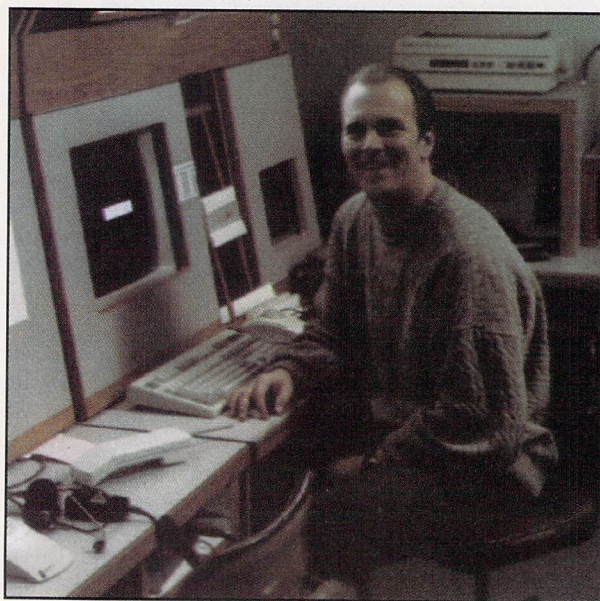
by Brian Gallagher

## THE BBS THAT BUILT AN AIRPORT

Located on the Auraria Campus in the heart of downtown Denver, Mickey Russell keeps his aviation students up to date on their class requirements, class schedules and even graduation agreements through the Aerospace BBS, (303)556-4154. The two line Galacticom system with Durand Communications Genesys photographic database, is more than just a place where students keep up to date on what they need to do with their class schedules: it is, to a large extent, the reason that Metropolitan State College of Denver has one of the top three programs offering aviation degrees in the nation.

Russell set up the system while a junior in the college's aviation program and has since incorporated it into the extensive LAN between simulators and two air traffic controller machines, which incidentally run software that is \$35,000 per machine. For the set up that students now enjoy, the airlines and a consultant estimated the cost to be \$10 million with an additional \$2.5 million to get it going. Thanks to Russell's diligence and lack of fear when it comes to anything dealing with avionics or electronics, the college managed the feat at a fraction of the cost.

Several years ago Russell was featured in the pages of Boardwatch with his Flight Star Information Service BBS. That system was a thorough database of used aircraft - complete with a "bluebook" of prices on over 800 aircraft including pricey options such as radios, transmitters and differing grades of navigational equipment. It also adjusted the value of the



**Mickey Russell at Air Traffic  
Controller Terminal**

aircraft based upon the number of hours on the engine(s).

He is working on making a similar database on the Aerospace BBS, this time complete with pictures of the aircraft through Durand's photographic database, their performance specifications and ratings, along with resumes and overhead pictures of airports.

There are files with employment openings, lists of flight schools and FAA (Federal Aviation Administration) regulations and various aviation programs. Through dial-out lines on the BBS, pilots - and only pilots, are able to access DUAT, Direct User Access Terminals, to the most up-to-date weather and crash information available; which comes directly from the FAA and is supported by fuel taxes. There are also Fidonet echoes here, but only four: space, college, aviation and astronomy.

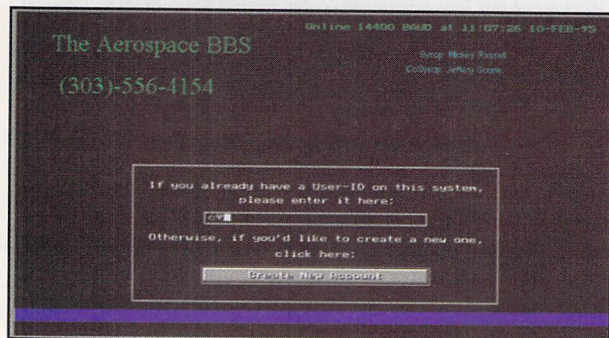
With two computers on each simulator, and another computer - the equivalent of a 386, inside the simulators, students file flight plans with the ATC machines and then "take-off" into the wild blue. This is where the real fun begins. Jeff Rouyer and myself had the privilege of "flying" one of these simulators, and while it wasn't connected to a hydraulic platform tossing you every which way you "steer" the aircraft, it was very realistic to actually flying a small aircraft; the sound of the engines was there, the instruments whirled this way and that and the feel of the wheel emulated a real aircraft more than one would expect.

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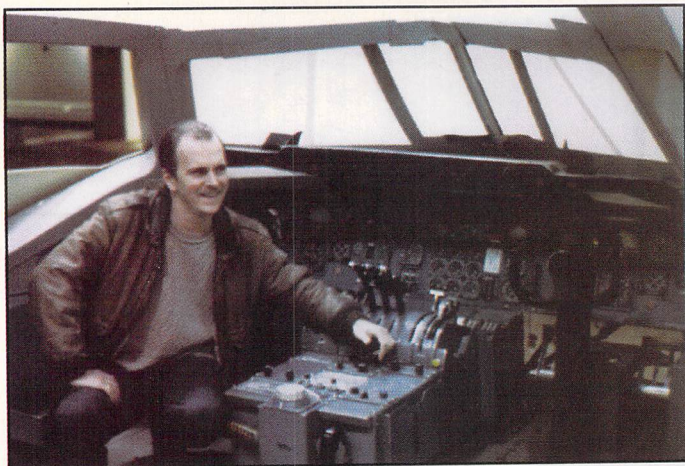
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**Logging onto the Aerospace BBS**





**Russell in cockpit of DC-10 simulator**

While students are cruising the friendly skies, one of the computers tracks their flight path as they go. And, like the real world, there are surprises to be had in this virtual airport, dubbed WIA, or the World Indoor Airport. Through an automated voice coming from the ATC machines, students are confronted with emergency situations such as hijackings, engine failure, engine fires, adverse weather conditions and icing conditions.

Russell who graduated in May of last year and holds a commercial pilot's license with multi-engine and instrument ratings, was hired by the college one week after graduating because he had become such an integral part of their program. Today, upgrading, adding to, and improving the system is an ongoing project, one in which the financial aid students on a work-study program play a big role. He gives them projects to do, like: "Write a program to integrate the BBS, the simulators and the ATC." A future project looming

for some lucky student is: "Here, connect the BBS to the Internet."

And these aren't computer science students, although many of these students do have at least some knowledge of computers. To a large extent the students just start reading books and making phone calls and working, working, working until their goal is achieved. And they get a reward for their work too - a letter of recommendation from Russell, which will almost certainly get them a job. The program currently provides a "large amount" of interns to United Airlines, Frontier Airlines and the FAA.

Russell isn't the dictatorial type, however, he works every bit as hard at maintaining the system as he expects his students to. A project he has been nipping at, naturally with the help of students, is that of rebuilding two full-scale DC-10 cockpit simulators, courtesy of United Airlines. The mammoth contraptions, circa 1974, come complete with a row of eight filing cabinet sized computers that are more of a mess of wires than anything else - not to worry, he has plans to replace all that gobbledygook with a single 486/33. Other institutions of higher learning should take example from Russell's accomplishments on this campus and similarly organize their departments electronically. Ambitious? You bet. Overworked? Depends upon how you look at it. He loves what he does, spends time with his family - wife Laurie and three Children, Angie, 11, Alexis, 9 and Larrissa, 6 and "I've still got time for my BBS," he said. "That's what keeps everything sane."

There are no subscription fees to the system, although an occasional file upload is appreciated. The Aerospace BBS, attn: Mickey Russell, Metropolitan State College of Denver, Department of Aerospace Science, Campus Box 30 - P.O.Box 173362, Denver, CO 80217-3362; (303)556-6174 voice; (303)556-4154 BBS. ♦

## INDEPENDENT FILMMAKERS FORUM

In the '30s, droves of would be "stars" and "starlets" flocked to Hollywood in hopes that their big break would be waiting for them there. In the '90s, taking the pulse of the entertainment industry is considerably easier through Phil Matuzic's Independent Filmmakers Forum, (310)425-0012. This four line system, running Mustang's Wildcat! software, is a perfect example of a very defined niche BBS.

The board has over 100 conferences including Usenet newsgroups - for the most part directly related to Independent Filmmakers' concerns and the film industry as a whole. The conferences unique to the system include: News & Announcements, Producers, Directors, Writers, Production Staff, Art, SFX Wardrobe, Makeup, Editors, Sound, Music & Post, Actors, Actresses, Stunts, Animation and Graphix, Location and a slew of others. Traffic on the system specific conferences is a little sparse at this time, but as word gets out, it is sure to pick up.

A nice thing about the Usenet newsgroups here is they are smartly placed right along side of the system conferences so there isn't any menu juggling to do if what you are looking to do is read and post messages - I wish everybody did it like this. Like the system conferences, the newsgroups are centered around the film making industry; some of the more



**Phil Matuzic - Sysop of IFF**

interesting were: **rec.arts.movies.production**, **rec.arts.sf.movies**, **alt.monster.movies**, **alt.horror**, **alt.movies.visual-effects**, **alt.sex.movies**, **rec.video.satellite.dbs**, **rec.music.reviews** The biggest difficulty Matuzic has had so far in dealing with the new users and the conference areas is with posting messages; it seems that people are looking for more complexity when entering a reply to one of these areas than there really is.





**Thumbnail composite of images (top), and oil painting (right) from IFF**

Like the messaging conferences, the file areas revolve around movie making with many of them being text files filled with information on everything from the Academy Awards and studio briefings to resumes, a filmmaker directory, production notes on a variety of films and movie reviews - including a review of 100 cannibal films by Paul Rapp.

In file area 1004, "Graphics and Pictures," is a wide variety of pictures on a number of topics. There are a number of girlie pictures in swim suits and bikinis, as well as a number of pictures of scenic sites from Nepal, India, Alaska, the Canadian rockies, Stockholm and Hong Kong among others. Trains are also a favorite theme, as are original and classic oil paintings, rock bands, military aircraft and of course - movie stars.

A nice feature when wanting to take a look at the pictures on this system is the ability to compile a thumbnail image of all the files you tag when browsing the images area. It's a lot better than using up valuable online time to download images you may or may not want. The composite thumbnail image comes complete with the images and their file names placed directly below them. If however, you decide you don't want say 12 of the 25 images on your thumbnail, you either have to individually delete them one by one, (a three key-stroke process), or re-type the remaining images that you do want. A nice improvement would be to delete the files you do not want en masse with commas in between the file names.

As with most all BBSs, the Independent Filmmakers Forum also has a rather complete compilation of standard files among the 5,000 available here. The areas include: LANs, Utilities, HAM Radio, Desktop Publishing, Communications Programs, Graphics Programs, File Compression Programs and Windows Programs.

It is not surprising to see such a well thought out and complete file area on the IFF, especially when you find out that Matuzic is not really an independent filmmaker himself, or even that knowledgeable about the industry, but is actually an Aerospace Engineer with Hughes Aircraft. He ended up with the independent filmmakers theme while speaking with a colleague whose hobby was filmmaking. Matuzic was looking for a niche-theme for a BBS and the filmmaking thing was "a total curve ball," he said.

First online May 15, 1993, Matuzic diligently constructed the system to be as error free and complete as possible. A big boost came when one day he received a call from a man who was formerly an independent filmmaker and wanted to interview him for his newsletter titled, "INDIE," the Independent Filmmaker's Electronic Newsletter. The gentleman, with over 20 years in the business and over 50 films to his credit, has been working with Matuzic since December of 1994 which considerably increased the traffic of this system as word got out to "those in the know."



Matuzic was an attendee at the 1993 ONE BBSCON in Colorado Springs and also the 1994 ONE BBSCON in Atlanta. At the first convention he said, "I was shell-shocked, I hardly talked to anyone - I was in sponge mode," soaking up all of the information he could as fast as he could. At the second convention however, he was talking to everyone, adding that the networking with other sysops was an incredible and valuable experience.

The Independent Filmmakers Forum takes about 30 calls per day and is busiest in the evenings after 11:00 p.m. and supports QWK, echo and Internet mail. He has future plans for a Web page to be done through his Internet service provider and already has four more lines lying in wait for when the system really takes off.

There are several different subscription packages, each covering a three month period. For **\$19.95** callers receive 30 minutes per day of online time, newsgroup and local conference access. For **\$24.95** access is boosted to one hour per day, Internet e-mail, the ability to post a resume, INDIE and other filmmaking files. A business subscription, **\$34.95**, provides two hours per day access, all of the above and general interest newsgroup access as well as a personal voice mail box. And the executive membership, **\$49.95**, offers all of the above with unlimited access and unlimited newsgroups.

The Independent Filmmakers Forum, attn: Phil Matuzic, P.O.Box 8112, Long Beach, CA 90808-0112; (310)425-0012 BBS; (310)425-5331 voice support. ♦



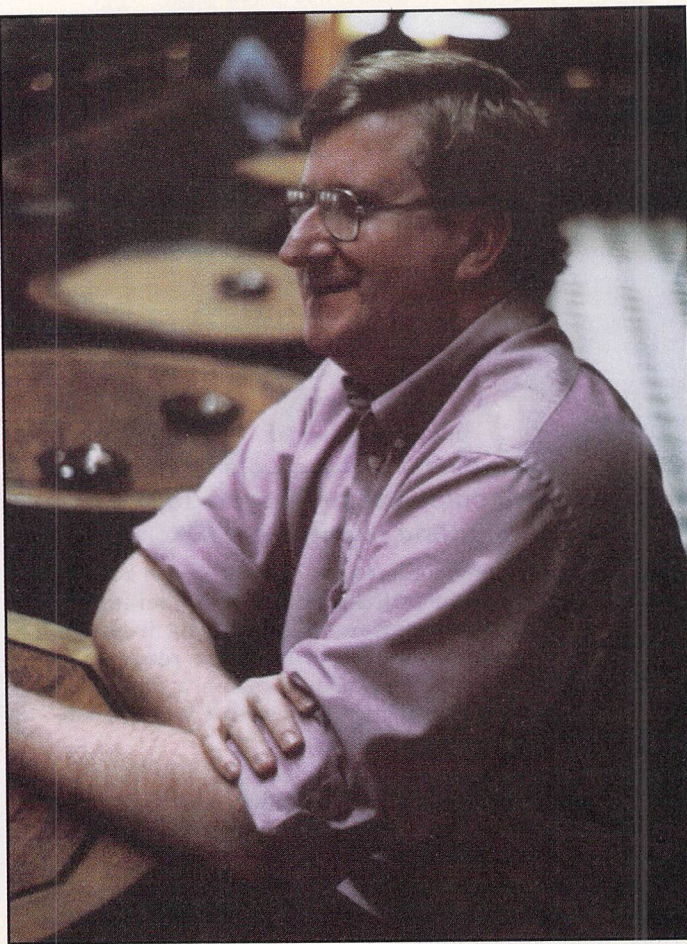
## MAPPING BY MODEM

**L**ocated in the chronically trendy city of Boulder Colorado, Bill Thoen is a sysop who is keeping up with what's new in cyberland while making a few marks of his own in this ethereal landscape we call online. Thoen, sysop of the two-line GISnet BBS, (Geographic Information Systems), (303)447-0927, has been running his Wildcat! system since October of 1991 and has garnered an international following for the niche files and discussion that can be found here.

But it is not just these efforts that have garnered Thoen a devout following, he is also the sysop of the RMAG's BBS, (303)473-0048 - (Rocky Mountain Association of Geologist) and is in the process of constructing MININGnet, a system he is building for the "Mining Business Digest" a trade publication. "Those things are like blackholes," he said of his three BBSs, "they suck up every moment you have free." As if this weren't enough, he also began COGSnet (Computer Oriented Geologic Society), (303)526-1617, in late 1985 which initially ran on a Vax machine and migrated to a PC platform sometime in 1988, and he is responsible for and very much involved with the rapidly growing GeoInfo Net, where earth science boards gather to stay up on industry happenings.

Thoen, who has a degree in geology, and has telecommuted for various firms since 1989, maintains a business as a GIS consultant. In particular he deals GIS/desktop mapping software from the MapInfo. Corporation of Troy, New York - the best software out there for the PC, he said. Expecting the industry to boom in the near future he said, "companies are finding that they need maps as bad as they need charts and bar graphs."

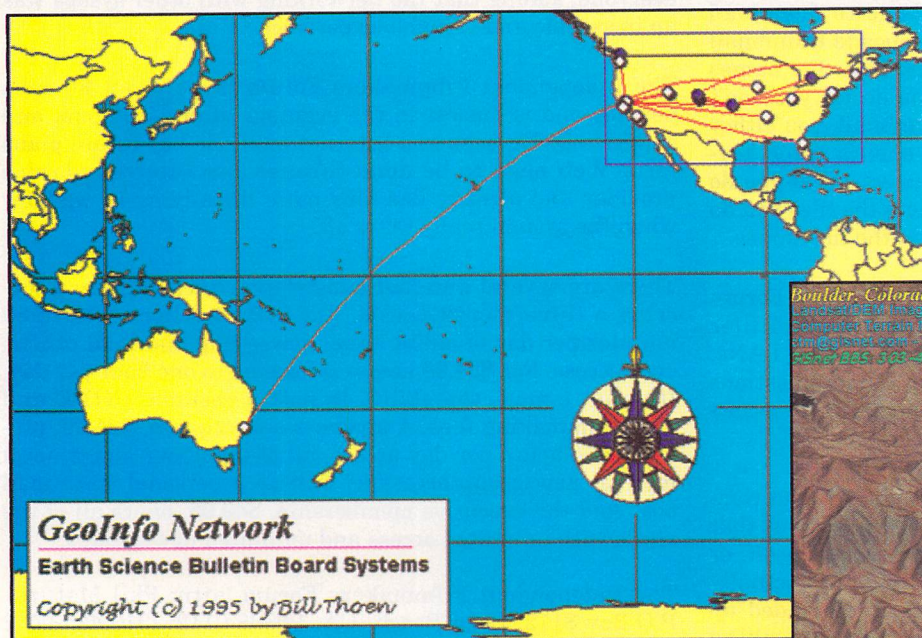
While GISnet takes thousands of calls, it has only 100 to 150 paying subscribers from the United States, Australia, Japan and South Africa. And that suits him just fine - what



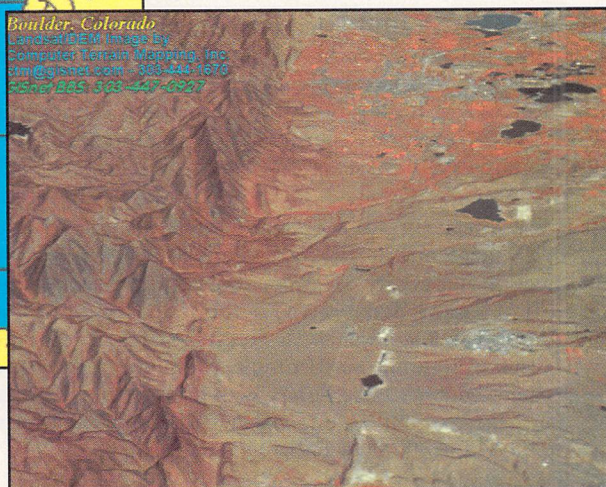
**BBS and GIS Guru Bill Thoen**

attracts him most to the industry is the *idea* of having a BBS, and he has some advice for those out there looking to set one up on their own.

For starters, all too often he is approached with those who want to have a BBS and just have money come dribbling out of their modem every day and twice as much on weekends. What they don't seem to comprehend, he said, is that once the system is set up, that's just the beginning. There are



**GeoInfo Net BBSs (above), and GIS map of Boulder Colorado (right)**





menus, bulletins, and newsletters to write, (he calls writing the "fuel" that drives the system), not to mention the daily maintenance that comes with the title sysop. Also, there is the e-mail that must be answered in a timely fashion (everyday); "If you don't answer (messages) in 24 hours," he said, "why do you have a BBS? You might as well mail a letter." And, those with newer systems wondering where all their callers are should wait at least six months before worrying too much, he said. Thoen has graphed caller statistics for new systems and the six month lull seems to be a consistent trend.

For sysops looking to establish themselves in a certain niche, Thoen recommends finding that niche and making it the best it can be, "Once you concentrate on something and become the best there is at it, people will seek you out because there isn't any better." For those who are meddling with the thought of advertising on the net and haven't figured out how, Thoen has, and to a large extent he feels that those advertisers out there in cyberland are completely missing the boat when it comes to just how to do it.

The big thing they are missing, he said, is the advantage that being online offers over conventional advertising methods - namely, the interaction with potential or existing customers. For many would-be advertisers, the net can be a fearsome place if you don't know the intricacies of netiquette. "There's a way to do it (advertise)," he said, "and there's definitely a way not to do it."

Thoen, who estimates one third of his business income comes from net advertising, recommends religiously following applicable newsgroups and *participating* in those newsgroups; when a post comes up that his product may be the answer to, he often replies not only with *his* product information but also with similar shareware packages that should do the job, however, not quite as well. The biggest mistake he sees is when a not so net savvy (individual or company,) posts a five page advertisement in a newsgroup, "There is nothing worse than getting junk mail that you have to pay for," he said. "If you can't say it in five lines, you need to re-write it."

Back on GISnet, the system is a virtual wellspring of mapping and cartography information. File areas include "Mapping (I and II)," "Remote Sensing," "Digital Atlas," "Weather info, maps, sat images," "Surveying," "Digital Elevation Data," "USGS DLG," "AutoCAD," "Map Data Sets," "Space & Planetary Science," "Job Market," as well as standard DOS and Macintosh files.

All told, the system carries hundreds of files covering the array of PC mapping tools including: maps from around the world in differing formats, conversion programs to make them any other kind of format, a map of the world that moves with the sun, programs to make maps (the best share-

## GeoInfo Net BBSs

### Netmail Hubs:

|                        |               |                           |
|------------------------|---------------|---------------------------|
| GeoNet BBS             | (316)265-1994 | Wichita, KS               |
| CDMG ONLINE            | (916)327-1208 | Sacramento, CA            |
| GeoFuel GeoScience BBS | (905)829-4097 | Oakville, Ontario         |
| GISnet BBS             | (303)447-0927 | Boulder, CO               |
| Dark Matter            | (604)534-7667 | Langley, British Columbia |
| NASA MLP BBS           | (206)871-3965 | Port Orchard, WA          |

### Net Nodes:

|                         |               |                    |
|-------------------------|---------------|--------------------|
| GeoTechnica BBS         | (303)933-0712 | Littleton, CO      |
| Computer Plumber BBS    | (319)337-6723 | Iowa City, IA      |
| PSN San Jose            | (408)226-0675 | San Jose, CA       |
| PSN Pasadena            | (818)797-0536 | Pasadena, CA       |
| PSN Memphis             | (901)360-0302 | Memphis, TN        |
| COGSNET                 | (303)526-1617 | Golden, CO         |
| SurveyNet BBS           | (207)549-3213 | Whitefield, ME     |
| Megalopolis             | (801)489-7910 | Springville, UT    |
| U.S. Geological Survey  | (415)327-1517 | Menlo Park, CA     |
| RMAG BBS                | (303)473-0048 | Boulder, CO        |
| Mountains West BBS      | (916)726-2771 | Citrus Heights, CA |
| Lynn's Live Wire        | (408)746-0370 | Sunnyvale, CA      |
| The Scientist's BBS     | (216)639-9508 | Concord, OH        |
| dr One's Operation Room | (908)873-0001 | Somersset, NJ      |
| The Black Hole II BBS   | (805)399-9459 | Bakersfield, CA    |

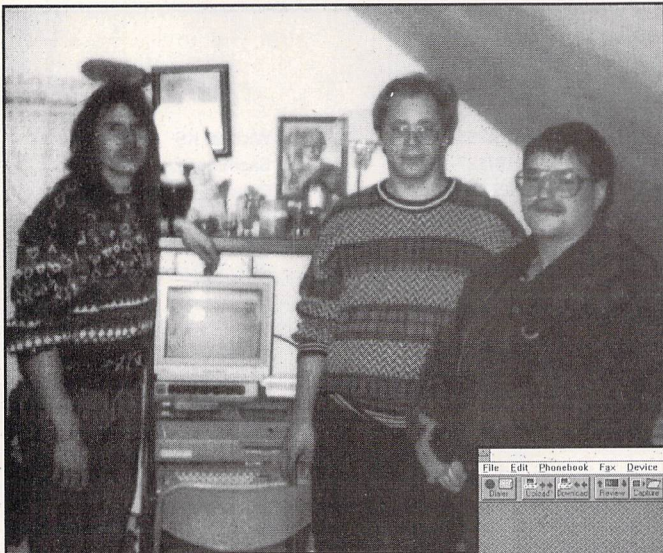
ware program he recommends is **versamap**, file **vmap140.zip** in file area **Mapping I**), a program such as the **distance.zip**, which calculates distances between two latitude/longitude coordinates as well as the source code to many of these files.

In addition, this system is not remiss when it comes to conferences concerning the same. There are over 50 conferences on the GISnet including "Maps & Data," "GPS, Satellites, Geodesy," "AutoCAD for Maps," and "Legal issues in GIS." Conferences in the GeoInfo Net area include: "GeoScience Meetings," "Job Market," "Prospect Fair," "Mining Geology," "Paleontology," "Petroleum Geology" and "Seismology" among others. And there are a few select Internet newsgroups here - **comp.infosystems.interpedia** (the Internet encyclopedia project), **comp.infosystems.gis**, **scl.geo.geology** and **scl.geo.meteorology**

The BBSs aside, it is the Web that really focuses much of his attentions today. At the URL: <http://www.csn.net/~bthoen/geoinfo/> websters can view up to date information about the recent Japanese earthquake, the California floods, maps of the Gaza Strip, Virtual World Tours, Online Resources for Earth Sciences, files, e-mail experts, and maps depicting the names and locations of GeoInfo net BBSs from around the world. GISnet BBS or GeoInfo Net, one stop shopping for all your earth science needs.

GISnet BBS, Bill Thoen, 1401 Walnut Street, Suite C, Boulder, CO 80302; (303)786-9961 voice; (303)447-0927; [bthoen@gisnet.com](mailto:bthoen@gisnet.com) Internet e-mail. ♦





## 167 MILWAUKEE BBSs

In the suburbs of Milwaukee Wisconsin, 23-year-old Mark Grabowski enjoys BBSing and keeping the definitive list for the area. The list, comprising 167 bulletin boards, Grabowski uploads to six area boards: The Castle, (414)327-5085, Imaginary Reality, (414)827-8802, Holt Avenue, (414)543-6593, Hidden Harbor, (414)453-7465, Black Sheep, (414)543-9356 and Night Shift, (414)442-2091.

Updated monthly with help from other sysops and BBSers, Grabowski started keeping the list two years ago, initially compiling it from other smaller lists in the area because the only lists available in the area were smallish and not very well-kept, he said. On any of the systems carrying the list it can be found with the filename "List" followed by the month and year, i.e. January's list would be **List0195** and March's list would be **List0395**.

Broken down into various categories such as software, hardware and pay and free systems, the list gives callers a good idea of what Milwaukee BBSers are up to. Among the free systems there is a strong preponderance of shareware systems including Amiga, Maximus, TriBBS, Virtual BBS, World War IV and Commodore and Atari systems. Out the free systems listed the only major commercial software vendor with a discernible presence is Wildcat! with 17 systems - more than any other system pay or free.

For pay systems however, it is the Major BBS that takes the lead with 11 systems to its credit. And all of the for pay systems, not surprisingly, tend to have multiple lines. Multiple telephone numbers are listed with the systems as well as the gambit of what you are likely to find on these systems.

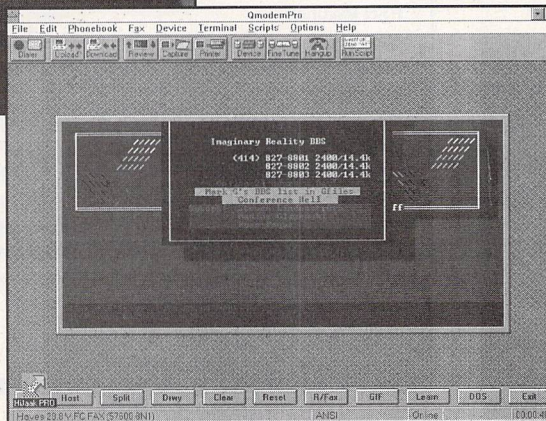
Modem speeds are included in all references to each system here as well as a variety of features of systems including games (GA), Fidonet, how many megs or gigs of files are available, what those files are likely to pertain to, various networks, Internet access, adult access, some subscription fees, chat and most anything else you would want to know

about a system calling it dry. The most common feature listed here was games with 45 percent of the systems touting these as one of their major attractions.

For modem speeds, callers will notice out of 248 total telephone numbers listed (including multiple lines to the same system), Milwaukee BBSers are not hurting for fast modem connections in any sense of the word. There are 153 num-

**Steve Lindenstruth,  
Mark Grabowski  
and Daron Brusewitz  
(left to right)**

bers attributed to 14.4 Kbps modems and 35 numbers attributed to 28.8 Kbps modems - giving callers 76 percent of their connections at 14.4 Kbps or better.



### Logging on to the Imaginary Reality BBS

Grabowski is co-sysop on the Imaginary Reality BBS, (414)827-8802 run by friend Steve Lindenstruth, and he enjoys gaming and the general feel and idea of BBSing, but he doesn't see a career brewing here. After attending the Milwaukee Area Technical College with an emphasis on programming, he decided it just wasn't for him. The list can be found on the Imaginary Reality by hitting "B" at the main menu and then the number "1."

For those wishing to add their system to his list, leave a message to Grabowski on one of the systems listed above or send him a Fidonet message - his address is **1:154/907**. ♦

## BBS LIST KEY

### Explanation of codes listed next to the board's name.

- (#) BBS has recently changed its number.
- (%) BBS has changed software packages.
- (@) BBS has changed its name.
- (NA) The board is not answering this month when it was verified.
- (##) BBS has just been added to this bbs list.
- (\$)

### Explanation of what files a BBS has to offer.

- (A) Stands for Amiga files.
- (M) Stands for Mac files.
- (P) Stands for Apple files.
- (X) Stands for Adult files.
- (G) Stands for non-adult Gif pictures.
- (I) Stands for Ibm files.
- (P) Stands for Apple files.
- (T) Stands for Atari files.
- (C) Stands for Commodore 64/128 files
- (&) Stands for Music files such as .mods, .wavs, etc.
- (W) Stands for files for the Windows Software.
- (N) Stands for No files.

### Explanation of codes in the Miscellaneous info section.

- (GA) Stands for Online Games.
- (InterM) Means the bbs offers Internet Email but not a direct line.
- (CS) Means the modem is a Compucom Star modem.
- (MESSAGES) Means the bbs has a lot of local messages available, Net messages are not included here but assumed when the Net is listed.
- (Rip) Means you can view the board in Rip graphics.
- (SDN) Software distribution Net.
- (PDN) Programming distribution Net.

All boards are 24 hours/7 days/Free unless otherwise noted.



# MILWAUKEE COUNTY BBS LIST

# 414

AREA CODE

| NAME                                 | NUMBER   | INFORMATION                                | NAME                               | NUMBER   | INFORMATION                                |
|--------------------------------------|----------|--|------------------------------------|----------|--|
| <b>Amiga Boards</b>                  |          |  |                                    |          |  |
| Faxs BBS System                      | 466-4039 | (A/I) PcBoard, 14.4Dual, CD-ROM            | Forbidden Zone                     | 461-9702 | (I/G) 14.4v32bis, Fidonet, 650meg, GA      |
| Hidden Harbor                        | 453-9011 | (A/I/G/X) Wildcat, 14.4HST, 1gig           | Games Galore & More                | 453-7813 | (I) 14.4v32bis, CD-ROM, Fidonet, GA        |
|                                      | 453-9012 | 14.4HST, Online Chat                       | In-Med BBS                         | 259-9629 | (I/M) 14.4Dual, Fidonet, GA                |
|                                      | 453-9042 | 28.8Dual, GA, Rip                          | InVINCEible                        | 425-7434 | (I) 14.4v32bis, Rip, GA                    |
|                                      | 453-7465 | 14.4v32bis                                 | The Lens                           | 453-6789 | (I/G) 14.4Dual, AutoCAD, 900meg            |
|                                      | 453-7466 | 14.4v32bis                                 |                                    | 453-6785 | 14.4v32bis, Messages, GA                   |
|                                      | 453-9045 | 14.4v32bis                                 | Night Shift                        | 442-2091 | (I/X/G) 28.8V.FC, 2CD-ROM, WiscNet,        |
|                                      | 453-9046 | 2400                                       |                                    | 442-2066 | 14.4v32, Fidonet, Adultlinks, InterM, GA   |
| Imaginary Reality                    | 827-8801 | A/M/I/X) Cnet-Pro, 14.4v32bis              | PK Ware BBS                        | 354-8670 | (I/G/T/A) 14.4Dual, 4 lines, 6.7gig        |
|                                      | 827-8802 | 14.4v32bis, GA, Online Chat                | <b>Renegade Software Boards</b>    |          |  |
|                                      | 827-8803 | 14.4v32bis, Messages                       | Black Dragon's Lair                | 544-9766 | (I) 14.4v32bis, Rip, GA                    |
| Modern Pastimes                      | 384-1701 | (A/I) TAG, 96v32, 9AM-9PM, Amiganet        | Black Sheep (\$)                   | 543-9356 | (I/X) 14.4Dual, ItcNet, FidoNet, CD-ROM    |
|                                      | 384-4899 | 14.4Dual, GA, Fidonet, TAG support         |                                    | 543-9358 | 14.4Dual, GA, Adultlinks, SDN, InterM      |
| PSA-BBS (\$)                         | 278-5390 | (A) DLG-PRO, 14.4v32bis, 450meg, Amos      | Blessed are the Sick               | 242-2329 | (I) 28.8V.Fast, GA                         |
| YOPS III (\$)                        | 649-9361 | (A/I/X/&) Remote Access, 28.8Dual, 2.2gig  | Conservative American              | 549-6596 | (I/G/&) 14.4v32bis, ItcNet, Political talk |
|                                      | 649-9362 | 28.8Dual, Adultlinks, Fidonet, GA          | %Digital Addiction BBS             | 691-8966 | (I/X/&) 28.8V.FC, 1.6gig, GA               |
| <b>IBM Boards</b>                    |          |  |                                    | 691-8944 | 28.8V.FC                                   |
| <b>Galacticomm Major Boards</b>      |          |  | Digital Source                     | 962-7004 | (I) 14.4Dual, GA, Fidonet                  |
| Access C5 BBS                        | 797-8984 | (I/G) 14.4v32bis, Autocad talk, Rip        | End Of the Galaxy                  | 545-6178 | (I/X/&W) 28.8V.FC, CD-ROM, Fidonet,        |
| The Parallel Universe                | 966-1872 | (I) 14.4v32bis, Fidonet, IICS, CFDN        |                                    | 545-4645 | 14.4v32, Complete Internet, ItcNet, GA     |
| RightSource BBS                      | 375-2255 | (I) 14.4v32bis, CD-ROM, Christian, Fidonet | ##Hell's Inn                       | 384-6102 | (I/X/&) 28.8, Messages, CD-ROM, GA         |
| <b>Maximus Software Boards</b>       |          |  | Holt Avenue                        | 543-6593 | (I/X) 14.4v32bis, Adult, Ham Radio talk    |
| Disaster Area                        | 769-6964 | (I/X) 14.4v32bis, Fidonet, CD-ROM          | Ice House                          | 679-3628 | (I) 14.4Dual, 450meg                       |
| Edit Suite                           | 466-9983 | (I) 14.4v32bis, Fidonet, InterM            |                                    | 679-4292 | 14.4v32bis                                 |
| Gentlemen's Club                     | 251-9564 | (I/X/&) 14.4v32bis, Star Trek, GA          | Jam II                             | 873-8393 | (I/X/G) 28.8V.Fast, ItcNet, GA             |
| Joe's Garage                         | 453-5145 | (I) 14.4v32bis, Fidonet, GA, HDN/OS2/DOS   | The Love Shack                     | 549-3223 | (I/M/X) 14.4v32bis, Meeting people place   |
| Net F/X BBS                          | 695-0902 | (I) 28.8V.FC, Fidonet, OS2Net, IbmNet      | S.D.I. ][                          | 679-9465 | (I) 28.8Dual, Messages                     |
| S.M.U.G.R. BBS                       | 835-7754 | (I) 14.4Dual, Relaynet                     | This Here BBS                      | 376-7662 | (I/X) 28.8V34, 540meg, GA                  |
| <b>PCboard Software Boards</b>       |          |  |                                    | 376-1006 | 14.4v32bis                                 |
| Nitro Youth Energy                   | 679-8660 | (I/G) 14.4v32bis, 700 meg, GA              | <b>Rybbs Software Boards</b>       |          |  |
| The Storyboard                       | 355-9023 | (I/W) 14.4v32bis, 2CD-ROM                  | Aardvark Airlines                  | 764-1808 | (I/W) 14.4v32bis, Moraffware, Windows, GA  |
| <b>Remote Access Software Boards</b> |          |  | Bergved Clown/Juggli               | 774-5895 | (I) 2400, Hobby talk, CD-ROM               |
| Anonymous BBS (\$)                   | 251-2580 | (I) 28.8V.FC, Fidonet, 1.7gig, GA          | Christian Connection               | 541-6105 | (I/M) 28.8V34, Religion, 880meg            |
| The Castle                           | 327-5085 | (I/G/X) 14.4Dual, Fidonet                  | Mcbin                              | 278-4350 | (N) 2400, Business Informatin Network      |
| The CGS BBS                          | 282-8691 | (I/G) 14.4v32bis, GA, Roboboard opt        | Rybbs Home Base                    | 962-1097 | (I/W) 14.4Dual, Area Happenings, GA        |
| Final Frontier                       | 255-9225 | (I/G/X) 14.4Dual, Messages, GA, Star Trek  |                                    | 962-1098 | Fidonet, Rybbs support, Windows            |
|                                      |          |  | ##Speedzone                        | 246-4547 | (I/X) 14.4v32bis, GA                       |
|                                      |          |  | Starfire BBS II                    | 355-8065 | (I/G) Speedmodem, 5PM-8AM, Messages,       |
|                                      |          |  | Trax Facts                         | 444-7793 | (I) 2400, 40megs                           |
|                                      |          |  | <b>Searchlight Software Boards</b> |          |  |
|                                      |          |  | Midnight Express                   | 672-9992 | (I/X) 14.4v32bis, CD-ROM, Rip, Fidonet     |
|                                      |          |  | The Realm of Chaos                 | 691-4866 | (I) 14.4v32bis, D-n-D, GA, Rip             |
|                                      |          |  | Red Dragon Inn                     | 327-4363 | (I) 14.4v32bis, Fidonet, GA, Rip, Pay?     |
|                                      |          |  | Stray's Stronghold                 | 645-7047 | (I) 14.4v32bis, GA, Rip, Fidonet, InterM   |



**Spitfire Software Boards**

|                     |          |   |
|---------------------|----------|---|
| The Batcave (\$)    | 354-5200 | (I/W) 28.8V.FC, Rip, Messages, Politics     |
| Career Connection   | 258-0164 | (N) 2400, Job search, Christian, Messages   |
| The Club BBS        | 762-4675 | (I) 14.4v32bis, Rip, GA                     |
| Computer Plus       | 677-4499 | (I) 16.8Dual, Messages, 2gigs, GA           |
| Dispatch BBS        | 463-0127 | (I/W) 14.4v32bis, Rip, Docs, GA             |
| Dr. Circuit's Lab   | 966-3685 | (I/G) 14.4v32bis, Messages, Fidonet, 3gigs  |
| Dr. Circuit's Lab   | 966-7674 | 14.4Dual, CD-ROM, Soundblaster files, GA    |
| Entropy, Chaos, and | 679-2460 | (I/X) 14.4v32bis, Fantasy Role Playing      |
| #Planet Palsy       | 761-2556 | (I/W) 14.4v32bis, 200meg, GA                |
| Plum Loco BBS       | 462-9073 | (I/X/G) 14.4Dual, 1gig, Fidonet, Adultlinks |
|                     | 464-4462 | 28.8V.FC, ItcNet, RipNet, FantasyNet, GA    |

**TriBBS Software Boards**

|                    |          |   |
|--------------------|----------|---|
| Astro Net-1BBS     | 481-9976 | (I) 14.4v32bis, Astrology/Tarot cards       |
| Birch Bark BBS     | 242-5070 | (I) 14.4v32bis, Conservative talk/Economics |
| ##Common Place     | 246-7017 | (I/X) 14.4v32bis, GA                        |
| Digital Ham Shack  | 251-1106 | (I/G/M) 14.4v32bis, CD-Rom, Hams            |
|                    | 251-0201 | 28.8V.Fast, Rip, Online Chat, Broadcasting  |
|                    | 251-6599 | 28.8V.Fast, 4.5gigs, WmeNet                 |
| Fire N Ice         | 321-2877 | (I/X) 14.4v32bis, Building Trades, GA       |
| Holy Moses BBS     | 933-9989 | (N) 2400, Religion                          |
| Image of the Beast | 367-1523 | (I) 14.4v32bis, CD-ROM                      |
| Lynx BBS           | 783-5766 | (I) 14.4v32bis, 10PM-3PM, Star Trek, GA     |
| The Richfield BBS  | 628-0946 | (I/G) 14.4v32bis, WME net, Rip              |
|                    | 628-0976 | 14.4v32bis, Washington County Info.         |

**Virtual BBS Software Boards**

|                     |          |  |
|---------------------|----------|--|
| Crush BBS           | 327-4636 | (I) 14.4v32bis, Rip, VirtualNet          |
| Devil's Triangle ]] | 483-6805 | (I/X) 14.4v32bis, Rip, Messages          |
| The Direct Line BBS | 647-1795 | (I) 14.4v32bis, V/Rush/EmeraldNets, GA   |
| Download City BBS   | 774-3435 | (I/X) 14.4v32bis, 1gig, GA, Vnet         |
|                     | 774-3585 | 14.4v32bis, EmeraldNet, CD-ROM, InterM   |
| Gaming Galleria     | 524-1015 | (I/W/X) 14.4v32bis, Messages, GA         |
| One Way Up BBS      | 466-0950 | (I) 14.4v32bis, CD-ROM, Rush/Vnets       |
| Rebel's Outpost II  | 827-1317 | (I/G/&) 14.4v32bis, Messages, Mods, NP   |
| Round Table         | 544-9121 | (I/&) 14.4v32bis, Messages, Mods, NP     |
| Slashland           | 645-1424 | (I/G/&) 14.4v32bis, Messages, 500meg, GA |
| Xaos Central Nexus  | 271-9791 | (I) 14.4Dual, Vnet, Pagan/Occult/Magick  |

**Wildcat Software Boards**

|                       |          |   |
|-----------------------|----------|---|
| Arena BBS             | 327-7842 | (I/W/G) 14.4v32bis, GA                      |
| Better Image BBS      | 425-1139 | (I) 14.4v32bis, Many files                  |
| Bull Stocks BBS       | 546-1761 | (I) 28.8Dual, Investment board and talk     |
| C.A.T.C.H. Resources  | 761-2582 | (I/G) 14.4v32bis, Fidonet, IGA Net, Rip     |
| (City of Flags)       | 761-9494 | 14.4v32bis, Job Link, Missing Kid Gifts     |
| Digital Data Exchange | 423-0441 | (I/G/X/&/M) 14.4Dual, 18CD-ROM, GA          |
| Disc Golfer BBS (\$)  | 964-5111 | (I/X) 14.4v32bis, Fidonet, Internet, GA     |
|                       | 964-5112 | 28.8V.FC                                    |
| The Escape Place      | 259-1885 | (I) 14.4v32bis, Fidonet, SDN, GA            |
|                       | 259-9575 | 14.4v32bis, Validated users only this line  |
| Eye of the Beyholder  | 541-8156 | (X) 14.4v32bis, Must be 21, CD-Rom          |
| Good News             | 365-1624 | (I) 28.8V.Fast, Christian, Fidonet/Internet |
| International Genera  | 351-1817 | (I) 14.4Dual, BIX support                   |
| ^^ USA                | 282-1493 | (I) 28.8V.FC, Fidonet, Usenet               |

|                   |          |   |
|-------------------|----------|---|
| Network BBS       | 764-6706 | (I/G/M/X) 14.4v32bis, Online Chat, GA   |
|                   | 764-6197 | 14.4v32bis, 8 lines available, Messages |
| Riptide BBS       | 425-8958 | (I) 14.4v32bis, Rip, CD-ROM, 11PM-9AM,  |
| Second Opinion    | 873-7807 | (I) 14.4Dual, Broadcasting files        |
| Softworks Support | 242-8835 | (I) 14.4v32bis                          |
| Systems Software  | 383-7507 | (I/X) 28.8Dual, Wildnet, Hotnet, CD-ROM |

**World War IV Software Boards**

|                     |          |   |
|---------------------|----------|---|
| Admiral's Wharf     | 327-6148 | (I) 14.4v32bis, InfiNet, GA               |
| Arcadia Games Inc.  | 764-9008 | (I) 14.4v32bis, SkyNet, WWivNet, GA       |
| The Black Board     | 768-0267 | (I) 28.8V.Fast, Skynet, GA, WWivNet       |
|                     | 768-8963 | 28.8V.Fast, Messages, 4CD-ROM             |
| The Crypt           | 547-0306 | (I/G/W) 14.4v32bis, Netmail, Dos, 550meg  |
| H.I.S.S.            | 367-5687 | (I/G/W) 14.4v32bis, WWivNet, Docs         |
| Lord and Master     | 547-2710 | (I) CS14.4v32bis, Netmail, GA, Unprotects |
| ##Main BBS          | 327-3111 | (I/X) 28.8, 1gig, CD-ROM                  |
| Mainframe           | 354-6183 | (I/G/X) CS14.4v32bis, 300meg, WWivNet     |
| Motivated Marketing | 764-9500 | (I/M/P) 2400, Messages, Classified Ads    |

**Miscellaneous Software Boards**

|                     |          |   |
|---------------------|----------|---|
| Basar BBS           | 352-5198 | (I) Superbbs, 2400, Fidonet, 20megs         |
| E's Rock-n-Roll     | 453-1413 | (I) RBBS-PC, 2400                           |
| ##Engineer's Online | 277-6955 | (I) TSX-BBS, 14.4v32bis, Fidonet, Internet  |
|                     | 277-6956 | 2400  |
|                     | 277-6957 |   |
| Immortality         | 643-1576 | (I) Juggernaut, 14.4v32bis, GA, Philosophy  |
| Mr. Homies Nghbr    | 764-7659 | (I/X/&)Proboard,14.4,Fido/AdultNet, GA, RIP |
| Online Salvation    | 768-8902 | (N) 14.4Dual, Religious talk and files      |
| Spacebald           | 355-9154 | (I) Proboard, 14.4v32bis, GA, Pay?          |
| Starfleet Command   | 321-7151 | (I) Roboboard-FX, 14.4v32bis, GA            |
| ##Underground BBS   | 328-0190 | (N) Jetbbs, 2400                            |
| Unseen Power BBS    | 258-8486 | (N) Microcosm, 14.4, Christian/Files        |
| Wonderlands         | 332-5717 | (I) RBBS-PC, 14.4v32bis, GA                 |

**Apple or Mac boards**

|                        |          |  |
|------------------------|----------|--|
| Automatic for the Peo. | 242-8924 | (M) Public Address, 14.4v32bis, Messages     |
| Boardwauc              | 543-9660 | (M/P) Gbbspro, 14.4v32bis, Messages          |
| D-Mac BBS              | 962-3622 | (M) Firstclass, 14.4v32bis, OneNet           |
|                        | 962-3640 | 14.4Dual, 170meg, CD-Rom                     |
| Netrunner              | 332-5910 | (M/I) Firstclass, 14.4v32bis, OneNet, \$25/y |
| Tower of Babble        | 672-5973 | (P) Gbbspro1.3, 2400, Messages               |
| The Trading Post       | 252-4671 | (P) Gbbspro2.1, 2400, Messages, GA           |

**Commodore Boards**

|                       |          |   |
|-----------------------|----------|---|
| The Battle Zone       | 355-7659 | (C) Color 64, 2400                      |
| Damage Inc.           | 384-6817 | (C) Image BBS, 2400, Nissa Assc BBS, GA |
| Dumbo's Flying Circus | 521-2440 | (C) Image BBS, 2400, Nissa Assc BBS     |
| Escape BBS            | 282-3932 | (C) EBBS 128, 1200, Messages            |
| Jammer's H.A.M        | 789-1034 | (C) Image BBS, 2400, Christian, GA      |
| The Pit               | 463-1421 | (C) Color 64, 2400, Messages, 20meg     |
| The Power Plant       | 769-7873 | (C) Image BBS, 2400, 40meg              |



| NAME | NUMBER | INFORMATION | NAME | NUMBER | INFORMATION |
|------|--------|-------------|------|--------|-------------|
|------|--------|-------------|------|--------|-------------|

## Atari Boards

|                      |          |                                       |
|----------------------|----------|---------------------------------------|
| M.A.S.T. Users Group | 461-1730 | (T) BBS Express, 14.4v32bis, Messages |
| Mil Atari Ltd.       | 476-9229 | (T) Citadel, 96v32, Atari user group  |
| Swap Shop            | 535-0786 | (T) TAG, 14.4Dual, Messages           |

## Texas Instruments/Geneve

|                   |          |                                 |
|-------------------|----------|---------------------------------|
| Cecure-Timaug BBS | 422-9669 | (Tex. Inst.) S&T bbs, 2400      |
| S&T Software BBS  | 464-1978 | (Tex. Inst.) S&T bbs, 96v32, GA |

## Direct Internet Boards

|             |          |  |
|-------------|----------|--|
| Mix         | 351-1139 | (N) 14.4v32bis, Usenet, UUCP, Internet |
|             | 351-4306 | 14.4v32bis, SLIP/PPP, Many Lines       |
|             | 351-2701 | 28.8, SLIP/PPP, \$5-\$30/month         |
| Solaria BBS | 342-4847 | (N) 14.4, FREE Internet and Usenet     |
| U.W.M       | 229-2953 | (N) 14.4, School Internet connection   |
| U.W.M       | 229-3859 | (N) 2400, This line for Students only  |
| U.W.M.      | 229-4197 | (N) 14.4, School Internet connection   |

## Pay Boards

### MajorBBS Software Boards

|                     |          |  |
|---------------------|----------|--|
| Black Unicorn Inn   | 384-9134 | (I) 14.4v32bis, New User Line, Interlink   |
|                     | 384-9136 | 24.4V.Fast, Worldlink, Pay, Online Chat    |
| The Chicken Ranch   | 476-2999 | (I/X/W) 96v32, NORML Regional News         |
|                     | 476-8754 | 14.4v32, CD-ROM, Hemp Information Net, GA  |
| Infomod             | 896-2660 | (I/A/G/M) 2400, \$10/month, Fidonet, GA    |
|                     | 896-2679 | 14.4Dual, Online Chat, Interlink,          |
| Majorjet            | 384-8306 | 14.4v32bis, Rip, Many lines                |
| Madame's Playhouse  | 486-2400 | (X) 2400, \$10 a month, GA, Rip            |
|                     | 486-2407 | 14.4Dual, Online Chat, Interlink           |
| Online Data System  | 761-5120 | (A/I/M/X) 2400, Online Chat, GA, InterM    |
|                     | 761-5143 | 16.8Dual, \$15/month, .50hour, MajorNet    |
|                     | 761-5133 | 14.4v32bis, Interlink, Worldlink           |
| Over the Edge       | 253-7600 | (I/A/M) 2400, Online Chat, .20-.30/hour    |
|                     | 253-7609 | 14.4v32bis, Many lines, GA, \$15/month     |
| Phantasy BBS        | 761-1933 | (N) 14.4, Online Chat, .40/hour, Chatlink  |
| Prolink Info Net    | 768-5500 | (I/M) 2400, Online Chat, GA, Chatlink      |
|                     | 768-5535 | 14.4v32bis, .50hour                        |
| Spectrum BBS        | 548-0817 | (I/G/&Q/X) 14.4, New User Line, 12CD-ROM   |
|                     | 548-0995 | 4 lines, Chat, \$10/Qtr up, Free Areas, GA |
| %StarCom BBS        | 541-9362 | (X) 14.4Dual, CD-ROM, \$20/year            |
| Ultima Data Network | 241-3301 | (I/G) 2400, GA, .50hour, Mutantlink        |
|                     | 241-8327 | 14.4, Interlink, Worldlink, WorldNet       |

### RBBS-PC Software Boards

|                   |          |  |
|-------------------|----------|--|
| Ableserv National | 289-7600 | (6 gigs) 14.4v32bis, CD-ROM, Online Chat   |
|                   | 289-7670 | 16.8Dual, \$75 a year, Internet, GA        |
|                   | 289-9597 | Speedmodem, 8 different bbs's in one       |
|                   | 289-9330 | Text Telephone                             |
| CSP/Glenn         | 289-0145 | (I/M/X) 2400, \$25/year, 5gig, Online Chat |
|                   | 289-9348 | 14.4v32bis, Gay/Lesbian/Adult, CD-ROM      |
|                   | 289-0181 | 14.4v32bis, Members only line              |

## Remote Access Software Boards

|                  |          |  |
|------------------|----------|--|
| Inner Circle BBS | 355-3691 | (I/C) 14.4v32bis, Fidonet, Online Chat |
| Country          | 355-8163 | 2400, Research Information, \$25/year  |
| Computer         | 355-8164 | 2400, Business Advertising             |

## The Bread Board Software Boards

|                      |          |   |
|----------------------|----------|---|
| Backdoor             | 744-9336 | (I/X/G) TBBS, 2400, Over 18 only, GA    |
|                      | 744-3556 | 2400, \$35 a year, Fidonet, Stud-Net    |
|                      | 744-6003 | 14.4Dual, 3CD-ROM, GaycommNet, 17 lines |
|                      | 744-6005 | 14.4v32bis, AfterdarkNet, VoyagerNet    |
|                      | 744-1962 | 28.8, ThrobNet, FemNet, Adultlinks      |
| Radio Free Milwaukee | 352-6176 | (A/P/M/T/G/I) TBBS, 2400, Fidonet, GA   |
|                      | 351-9056 | 2400, \$12 a year, Paranet              |
|                      | 351-1823 | 2400, Many odd computer types supported |
| Safe Harbor          | 548-8140 | (A/M/I/X/G) TBBS, 2400, Online Chat     |
|                      | 548-8153 | 14.4Dual, \$36 a year, GA               |
|                      | 548-8154 | 96v32, Mail order store for Amiga/Ibm   |
|                      | 548-8155 | 14.4Dual                                |

## Wildcat Software Boards

|                   |          |                                      |
|-------------------|----------|--------------------------------------|
| Dr. Pervitis      | 873-1680 | (X) 14.4v32bis, Over 18 only         |
|                   | 873-2838 | 14.4Dual, Messages, \$30 a year      |
| The Milwaukee BBS | 962-2377 | (I/A/G/P/C/M/X/T/&) 96v32, GA, 4gig  |
|                   | 962-0340 | 14.4v32bis, Internet(Soon), CD-ROM   |
|                   | 962-0488 | 14.4v32bis, Adultlinks(Soon)         |
|                   | 962-5016 | 14.4v32bis, \$30 a year(young adult) |
|                   | 962-5021 | 14.4v32bis, GA, Fidonet, Adult chat  |
|                   | 962-5045 | 14.4v32bis, Online Chat              |
|                   | 962-5065 | 14.4v32bis, \$50 a year(adult)       |

## Miscellaneous Software Boards

|                         |          |  |
|-------------------------|----------|--|
| Crossroads              | 282-0494 | (X) Oracomm-Plus, 2400, Usenet, Gay        |
| Exec Pc                 | 789-4210 | (I/A/M/&G/X/W) Custom bbs, 2400            |
|                         | 789-4337 | 9600HST, 280 lines, Apogee, Moraffware     |
| 789-4352                |          | 14.4HST, Big Message Base, Fidonet         |
|                         | 789-4450 | Speedmodem, 24Gig, Complete Internet       |
|                         | 789-4315 | 9600Hayes, \$25 3 months, \$75 a year      |
|                         | 789-4360 | 14.4v32bis, Unix/Linux support             |
|                         | 789-4390 | 14.4v32bis, Epic Megagames                 |
|                         | 789-4421 | 14.4v32bis, Free Cd-Rom collections        |
|                         | 789-4500 | 28.8V.Fast On-line                         |
|                         | 789-4502 | 28.8V.FC, Adultlinks                       |
|                         | 789-4477 | 57600 ISDN Dial up connection              |
|                         | 789-4600 | 28.8, This is the internet line            |
| Mister Dude's Wild Ride | 289-0708 | (I) Proboard, 14.4v32bis, 2gig, Fidonet    |
|                         | 289-0709 | 28.8V.Fast, Subscribers line, \$2/month    |
|                         | 289-9979 | 28.8V.Fast, Echonet, Robonet, RIP, CD-ROM  |
| Starcom BBS             | 873-6969 | (X/A/I) Opus, 2400, 3gigs                  |
|                         | 873-6980 | 2400, Gay, \$45 a year                     |
|                         | 445-6969 | 14.4Dual, CD-ROM, Fidonet                  |
| Welsnet (Lutheran)      | 475-7194 | (I/M) Pboard, 14.4Dual, Fidonet, \$20/year |



# GLOBAL ELECTRONIC YOUR BULLETIN

**T**he Personal Internet Mail Processor (PIMP) is an option module for eSoft, Inc.'s bulletin board system, The Bread Board System (TBBS). It allows any TBBS bulletin board to interact with the global Internet for electronic mail and USENET News Groups, and it provides one of the most integrated presentations of e-mail and newsgroups of any mail solution available in the online community. Callers to a TBBS system that has the PIMP option module will deal with global electronic mail in virtually exactly the same way they deal with local system e-mail - no ugly kludges or commands to learn to send mail to friends on CompuServe, Prodigy, America Online, or thousands of other sites in over 130 countries. If they have the Internet mail address of the person they wish to reach, they can send them mail without any further instruction at all. And all of your callers will have their own Internet e-mail address on your system. Anyone on earth can send them e-mail from anywhere, at any time.

PIMP imports RFC-822 style message files into the TBBS message base in real time. As a full TBBS option module, it loads with the BBS and operates continuously to import received mail to the message database, and export messages entered by callers for delivery to the Internet. It's primary function is as a message database import/export utility and mail gateway. And its main strength is that you do not have to take the system down at all - it operates in conjunction with TBBS to constantly import and export mail.

**In the most common configuration, to participate in the global exchange of electronic mail and USENET newsgroups, you need three things:**

- 1. A functioning TBBS bulletin board system.**
- 2. A dial-up UUCP host account with an Internet Service Provider.**
- 3. The Personal Internet Mail Processor (PIMP).**

## **For delivery, PIMP is quite flexible:**

- 1.** It can work with an external Unix-Unix Copy Program (UUCP) program such as Waffle's UUCICO or FXUUCICO.
- 2.** It includes its own internal UUCICO program that uses any unused BBS line and modem to dial your host and deliver mail as necessary, and pickup any waiting mail from your UUCP account host.
- 3.** It is fully compatible with eSoft's Internet Protocol Adapter (IPAD) for direct connections to the Internet and the Simple Mail Transfer Protocol (SMTP) capability for instant message delivery, as well as Net News Transport Protocol (NNTP) provided by IPAD.

## **FEATURES:**

### **SEAMLESS ELECTRONIC MAIL:**

PIMP is very tightly integrated into the TBBS system. Callers simply enter an Internet address in the normal TO field of the message, and that's where the message goes. They can use the normal R)eply function of TBBS to respond to mail received from anywhere in the world. File attachments are still attached, messages can be forwarded, all the functions of the TBBS message system work as they do locally. Beyond the Internet addressing itself, your callers already know how to send and receive mail to any site on earth.

### **INTERNAL UUCP G PROTOCOL:**

PIMP can use any unused BBS line to dial your host and do a full UUCP session, supporting Windows 7 and packet sizes up to 1024 bytes in size. This provides optimum UUCP protocol session performance to deliver mail and newsgroup messages to your host, and receive mail and newsgroup messages waiting for your BBS. You can use any available BBS line to do this, and can schedule this activity to occur as often as you like. Messages entered by callers can be scanned out and delivered in as little as one minute. Messages received from your host will be processed immediately after the call is completed.

### **USENET NEWSGROUPS:**

PIMP can support an unlimited number of newsgroups, and an unlimited number of newsgroup messages. The TBBS total limitation of 60,000 messages in the message base still applies. Newsgroups are very easy to configure using TBBS's topical message base structure. PIMP can toss a single message to multiple newsgroups for crossposting, and it handles long subject lines and RE: message threading. Messages longer than the TBBS limit of 9999 bytes are broken into a series of successive messages. PIMP can also process satellite delivered .BAG files directly.

### **FILE ATTACHMENTS:**

PIMP automatically and transparently deals with TBBS message file attachments. Messages received that include UUENCODED files are automatically decoded and presented as TBBS message file attachments to your callers and would appear to them exactly as any local message with a file attachment. Messages your callers send with a file attachment will automatically be UUENCODED for delivery to the Internet in a way that any recipient can easily uudecode to get the original file attachment intact.

### **MAILING LIST SERVER:**

You can host your own Internet mailing list on your TBBS system. Correspondents can add themselves to the list automatically by sending an e-mail message to the system, and likewise remove themselves from the mailing list with a simple e-mail message. When join-



# NIC MAIL FROM BOARD

## Jack Rickard's Personal Internet Mail Processor

# \$299

ing the list, they will automatically receive any file you specify as a welcome text file. All messages addressed to the list will automatically be reflected to all list correspondents - no matter where they are.

### FTP FILE SERVER:

PIMP can also act as a file server on a global basis. Correspondents from anywhere on the planet can send a simple e-mail message to your system requesting a specific file. PIMP will search the directories YOU make "public" for the corresponding file, and automatically send a reply message back with the file in UUENCODED format.

### INFORMATION SERVER:

PIMP will allow you to define specific "information" addresses. Any correspondent can send a simple message to this address with no instructions of any kind in the message - just the act of sending mail to the address will cause an automatic e-mail reply containing any file you specify. In this way, you can make product information, company profiles, newsletters, or anything else available on a global basis for anyone to retrieve - all entirely automatically.

### BOUNCE MESSAGES:

For every message your system receives, PIMP will automatically search your user database to see if the message is deliverable. If it is, the caller will find the message in their message waiting chain the next time they call. If the message is not deliverable, PIMP will automatically send out a reply message noting that no such user is registered at your site.

### UUCP SERVER:

PIMP can actually act as a UUCP hub server as well as a client. You can setup callers with UUCP accounts allowing them to dial up automatically and retrieve mail and newsgroups using any UUCP mail package. Their mail will be waiting for them, as well as any newsgroups they specify they want to receive. And multiple callers or other BBS systems can call your multiline TBBS simultaneously to do UUCP mail transfers.

Each account is actually a subdomain under your domain. For example, if your domain name is BIGBBS.COM, you can setup hundreds of accounts with subdomains under yours such as REDSTAR.BIGBBS.COM, WHITE.BIGBBS.COM, JOESBBS.BIGBBS.COM, SALLY.BIGBBS.COM and so forth. You can even build "pyramids" of systems connected via UUCP.

### TDBS APPLICATION SPAWNING:

eSoft also makes a database development option module called The Data Base System or TDBS. Almost ALL third party add-ons and programs for TBBS are actually written as a TDBS application. PIMP is NOT. PIMP is a 100% assembly language true option mod-

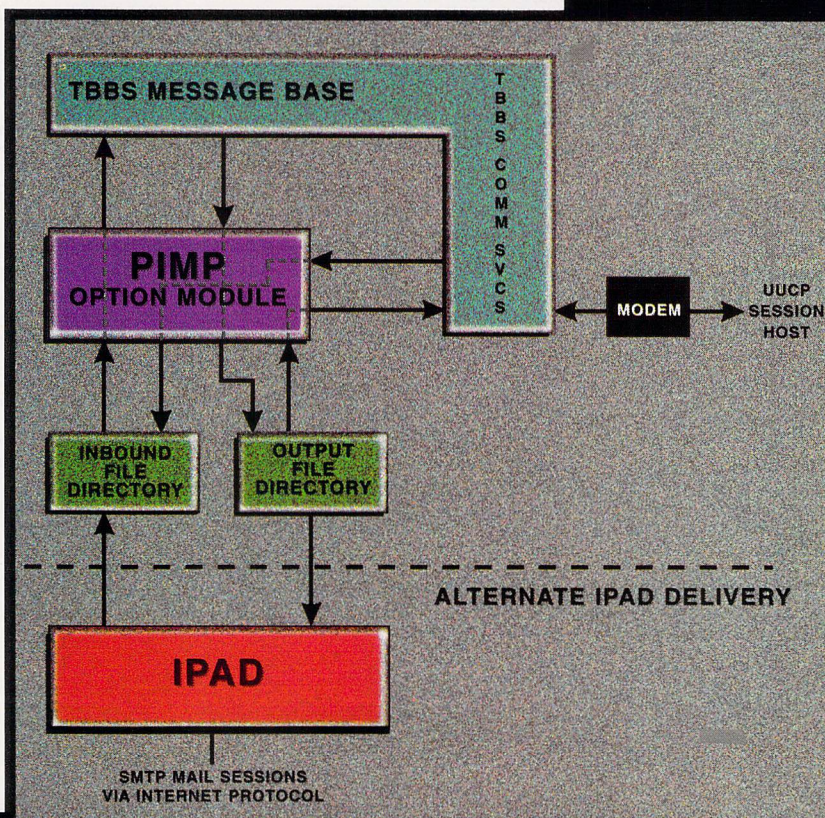
ule for TBBS similar to TDBS, ULTRACHAT, SYSOM, or other eSoft option modules. PIMP DOES NOT REQUIRE TDBS OR ANY OTHER TBBS OPTION MODULE FOR ANYTHING.

But PIMP CAN spawn or run other TDBS applications on receipt of mail or on creation of mail. In fact, it can run ANY TDBS application you specify and even run separate applications for receipt of mail from that run on creation of mail. So if you have some special mail pre or post processing you need for your application, you can develop this in TDBS and PIMP will run it for you. In fact, there are several such applications already available in the community.

### IPAD COMPATIBILITY:

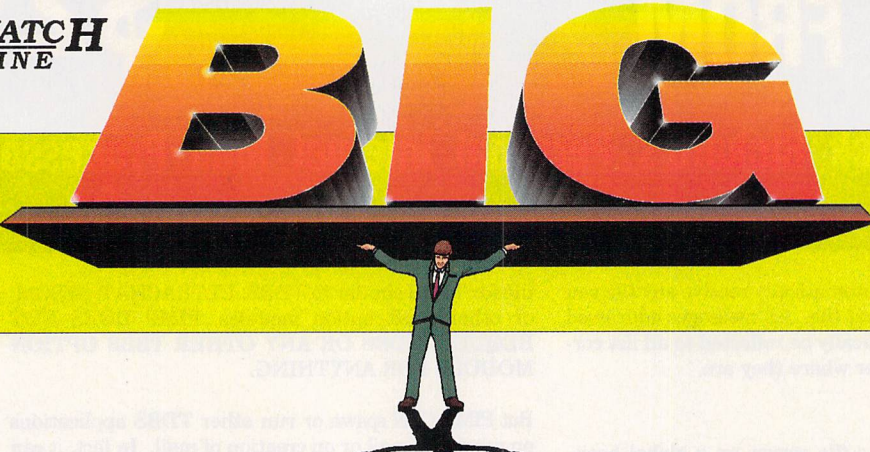
One of the most exciting developments for Internet connectivity is eSoft's Internet Protocol Adapter or IPAD. This component connects your TBBS system directly to the Internet using the Internet Protocol over leased lines or SLIP connections. PIMP and IPAD work together to provide almost instant global mail. The IPAD and PIMP can share inbound/outbound message directories with the IPAD providing SMTP client/server capabilities. PIMP feeds outbound mail to IPAD in the correct format and IPAD delivers it to its destination via SMTP. SMTP received by IPAD simply appears in PIMP's inbound message directory and PIMP adds it directly to the TBBS message base. USENET news is handled similarly.

To Order Call:  
**(303)973-6038**





# The BIG List



Advertise your electronic bulletin board/online information service in Boardwatch Magazine. Let our readers know who you are and what you're doing with online technology. To order a BBS ad in the Boardwatch Classified BBS ad section, call the Boardwatch BBS at (303) 973-4222 and use our online ad entry system. In addition to standard list information, enter up to 255 characters of text describing your online service - all for \$25 per month. Master Card or Visa only.

**MicroSeller BBS (201)239-0001** Verona, New Jersey since 03/83. Sysop: Mark Rapp. Using PCBoard 15.2 with 20 lines on MS-DOS with 10000 MB storage. Hayes at 28800 bps. No fee. PCBoard 15.x alpha site. NJ's preferred BBS for the pro 11 yrs running. HiSpeed lines. Local #'s available for easy access. Best-quality latest files games info gold mine. Many mail networks including Internet. Trial access provided. Major credit cards.

**Synergy Online (201)331-1797** Parsippany, New Jersey since 07/93. Sysop: Jim Boxmeyer. Using PCBoard 15.1 with 30 lines on MS-DOS 80486 with 15000 MB storage. Cardinal at 38400 bps. No fee. 20,000+ recent shareware files. 4,000+ conferences. Internet, Usenet, RIME, U'NI-net, Intelec and other networks online. Huge adult areas with over 10,000 GIFs. Daily weather, newspapers, magazines online. 30 Public lines available.

**Central Core BBS (201)575-8991** Montville, New Jersey since 01/85. Sysop: Mike Cocke. Using PCBoard 15.2 with 3 lines on MS-DOS with 3500 MB storage. ZyXel at 19200 bps. No fee. No fee for basic services, small fee for enhanced. A BBS for grownups of all ages. Free Internet trial access. Member ILink & BASNet echomail networks. Online national weather reports. Scrabble & trivia tournaments. Many technical interest files. No porn

**The Dark House BBS (201)662-9274** Guttenberg, New Jersey since 11/93. Sysop: Dan Lopez. Using WildCat 3.91M with 4 lines on MS-DOS with 4000 MB storage. Intel at 14400 bps. \$10 Annual fee. Call one of New Jersey's hottest boards, with over 8 cd's online. Over 35,000 files, 10,000 adult related. We also have doors, e-mail, and live chat. Newusers get a free trial period of access to the cd's and can then decide if they'd like to subscribe.

**Chat Chalet (201)791-8850** Saddle Brook, New Jersey since 04/91. Sysop: Ronnie Meier. Using MajorBBS 6.25 with 24 lines on MS-DOS with 877 MB storage. Practical at 14400 bps. \$10 Monthly fee. Where new friends meet. Send us our picture we will put it on Chat Chalet so you can download it. (free)

**BEACON STUDIOS BBS (201)863-5253** Union City, New Jersey since 01/93. Sysop: Conrad Scott. Using MajorBBS 6.21 with 23 lines on MS-DOS with 15090 MB storage. Supra at 14400 bps. \$.50 Hourly fee. Free downloads for new users with 60 min. allowed daily. Over 70,000 files on 14 CD's. New Jersey's only WorldLink and ChatLink BBS linked every night. Internet e-mail, newsgroups, MajorNet, FidoNet and games.

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**T-Shirts Online (207)865-1806** Freeport, Maine since 06/94. Sysop: Mike DeVaudreuil. Using PCBoard 15.1 with 1 line on MS-DOS with 540 MB storage. US Robotics at 14400 bps. No fee. Upload your favorite graphic file and we'll custom print it on a high quality t-shirt and mail it to you. High resolution, full color pictures. If you can see it on your computer screen, we can put it on a t-shirt.

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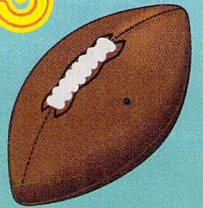
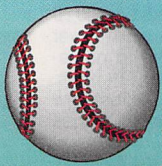
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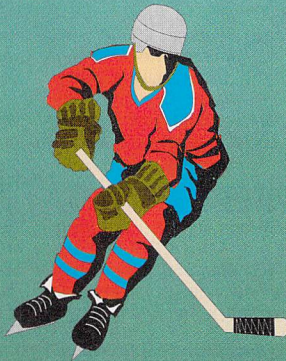


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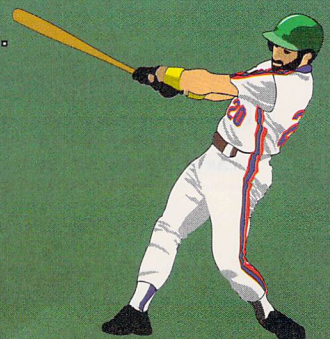
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**Wizards Keep (616)781-6134** Marshall, Michigan since 07/90. Sysop: Greg King. Using WildCat 4.0 with 2 lines on MS-DOS with 1020 MB storage. Hayes at 28800 bps. \$5 Hourly fee. We offer WildNet (hub), Internet, Usenet newsgroups, the latest in shareware off the satellite updated daily. Home of WiReNET, a brand new network. We offer a limited free account also. Will add any and all newsgroups wanted or Fido offerings.

**The Big Dog's BBS (616)979-5394** Battle Creek, Michigan since 01/95. Sysop: Rod Pinnick. Using MajorBBS 6.21f with 5 lines on MS-DOS with 1420 MB storage. US Robotics at 14400 bps. \$10 Monthly fee. Multi-player games such as 4-player DOOM and Heretic. Internet e-mail and newsgroups. Online games. Adult areas. Rip Graphics. Local access coming soon. Michigan's hottest new BBS. 13 Lines soon (probably by the time this goes to print).

**Flix, Pages & Tunes online! (617)235-0789** Boston, Massachusetts since 04/94. Sysop: Chris Donnegan. Using TBBS 2.2 with 6 lines on MS-DOS with 8450 MB storage. Hayes at 19200 bps. \$50 Annual fee. ASP approved BBS. Internet e-mail & usenet newsgroups. Online games. Info features on film, books and music. New features added regularly. Easy to use and easy to love. Visit our growing online community today.

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**THE ROSICRUCIAN FELLOWSHIP BBS (619)721-1828** Oceanside, California since 06/92. Sysop: Marie-José Clerc. Using MajorBBS 6.2 with 1 line on MS-DOS with 525 MB storage. PPI at 14400 bps. No fee. Dedicated to the promulgation of Rosicrucian Christianity. Multilingual text file library of the written legacy of Max Heindel, founder of The Rosicrucian Fellowship, an International Association of Christian Mystics. RIP support. Internet FTP site.

**Crystal Quill (703)241-8757** Arlington, Virginia since 04/93. Sysop: Crystal. Using MajorBBS 6.21 with 74 lines on MS-DOS with 4000 MB storage. US Robotics at 14400 bps. \$60 Hourly fee. DC's Premier BBS. 74 line chat-based system with MailLink, Interlink, MajorNet and Internet. 4 Gigs of files on CD-ROM, adult & teen areas, multiplayer games, matchmaking facilities, MC, VISA, 900; First 2 hours free. Telnet in. cq.cqi.com

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**World Data Network (703)620-8900** Washington, DC since 10/84. Sysop: Tony McClenny. Using PCBoard 15.2 with 35 lines on MS-DOS with 1200 MB storage. Hayes at 28800 bps. No fee. Internet telnet wdn.com (e-mail, ftp, news, telnet), largest Washington, DC metro PCBoard, 35 lines, 28.8k modems, 100 doors, 80k files, PC World news, <ASP> & AOP, 3000 mail network forums, free access. PCBoard reseller & installer.

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# DVORAK ONLINE by John C. Dvorak

## THE E-MAIL CONNECTION SEEMS TO BE FAILING

I've always been a promoter of e-mail as the primary form of communication, but recent failures are making me wonder if the potential for e-mail will be ruined by competing systems and bottlenecks. The question you have to ask: is it possible for U.S. snail mail to be faster than e-mail, and if so, why?

### WELL, IT IS AND IT'S HAPPENED TO ME RECENTLY

I sent a series of three MCI messages to a correspondent who received them out of order as follows: the third message was received first, about 10 hours after sending. It referred to the first message and thus made no sense. The first message was received 24 hours after it was sent and the second message was received 39 hours later. The conduit was from my MCI account to his AOL account. I'm unsure of whose fault this was, but I suspect BOTH. Recently I've had problems with my MCI account which I've always believed was the least likely to cause problems. MCI MAIL does nothing else but gateway to other systems. In the past when a message was lost it always seemed to be the fault of some weak link in the Internet chain or some problem with Lotus Notes, possibly the most unreliable system I've ever encountered when it comes to doing anything outside its own little world. Message after message was flat out lost between me and the MCI mail system at Ziff-Davis. Last week I received a couple of messages from my editors at MacUser nearly TWO WEEKS after they were mailed.

Apparently because of one crummy server crash, the messages were put in some sort of file where they languished until the Notes computer had nothing else to do but send them. But I've always felt that MCI was flawless regarding all this until two messages were lost about a month ago and when I looked into it via the MCI help desk I was told that they had a crash over the time I had sent my message and a lot of messages were lost. And I fired back a message asking exactly what was done to inform people of the possibility of lost messages? No response from MCI. Apparently nothing was done. Are they hoping nobody noticed? I wouldn't mind it one bit if I got a memo saying: CAUTION LOST MESSAGES! With an explanatory note telling me that messages may have been lost between certain hours on a certain date. At least I could do a routine resend. The ultimate joke was that they showed up in my outbox as sent. This is horrible.

Just as bad is the failure of different e-mail systems to do true confirmations of receipt. If I send an MCI message to an Internet account with a receipt attached the receipt is triggered ONLY when the Internet gateway picks up the message, not when the person gets it. In other words if it is lost after the gateway grabs it I'll never know. I got a receipt saying the person has it. How many Joe Average users know that this receipt message is a crock of crap? None is my guess.

The Internet is largely responsible for this mess. Instead of real gateways from system to system as MCI was doing over the past few years with some success, the Internet has become the fabric of interchange. Even IBMers are cherishing their Internet addresses and preferring them over the direct X.400 system that I thought was going to become company wide. Of course the X.400 system at IBM was a joke since the company seemed unwilling to use the conventional X.400 scheme and instead of a last name, for example, which in my case would obviously be DVORAK, I'd be DVORAKJ or something else that violates the true X.400 addressing scheme. I mean this whole scene isn't rocket science!

### WHY CAN'T WE DO IT RIGHT?

Anyway, in some ways the Internet is a joke as a conduit for commercial e-mail. There is no good receipt capability. Messages are lost and can be intercepted too. About three years ago I was bitching about lost mail over the Internet. I use e-mail all day everyday and I have for more than a decade and I can tell when a system is failing and when a message is lost. I lose at least one message a year over the Internet. While this seems like no big deal to the Internet faithful who claim they have never lost a message and "besides, it's free!" But even one lost message is one too many. I use these systems for things that are important, not merely for intellectual masturbation like a lot of these jokers who have criticized me for complaining about the Internet seem to use the thing for.

While I'm on the subject of online mail, let's talk a little about the screwiest situation yet developing: the laws concerning pornography. Ever since the Robert Thomas arrest for interstate distribution of "dirty" gifs, there has been a kind of jockeying for position regarding the movement of such things from computer to computer. Again, the Internet comes into play as one fellow was arrested for downloading kiddie porn from a BBS in Denmark and I believe it was over the Internet. He said he didn't know what he was doing, but was busted anyway.

In addition to his weekly syndicated radio call-in show, "Software/Hard-talk," syndicated newspaper columns, magazine writing for *MacUser*, *PC Computing*, *DEC Professional*, *Information Technology*, and his featured "Inside Track" column in *PC Magazine*, Dvorak is the author of several best-selling books, including *Dvorak's Inside Track to DOS & PC Performance*, *Dvorak's Guide to PC Telecommunications*, and *Dvorak's Inside Track to the Mac*.



Anyway, back to the Internet. How the heck can the world police its use concerning the shipment of illegal pornography without setting up traps to catch collectors? And what can they possibly do about person-to-person file transfer over various e-mail systems such as AOL and CompuServe, not to mention the Internet? It's hopeless unless everything is monitored and how is that possible? I think it is and I suspect it someday will be monitored. There is no reason that the 1000 (or so) lines going into, say, CompuServe at any given time cannot be captured by a government computer and anytime a .gif or .jpeg file is transferred it can come up on a screen in real-time for viewing by a government spy. The ID of the sender and of the recipient can be marked down for investigation. The U.S. Postal Service has long since made it illegal to use the U.S. postal system for conveyance of proscribed pornography. The e-mail systems want certain privacy rights by government mandate. If they ever get such rights afforded them they will also get the restrictions too. The only way to counter such a thing is to encrypt the files, but the government has been vehement about encryption and you can expect that eventually use of encryption itself will become some sort of crime. Sure, there will be a fuss. But SOME National Security scandal will result in the need to institute some sort of anti-encryption law that has more teeth than the current offerings.

Anyway, I was going to do the definitive story on this fiasco this month, but the parties involved keep changing their stories. Next month for sure! ♦

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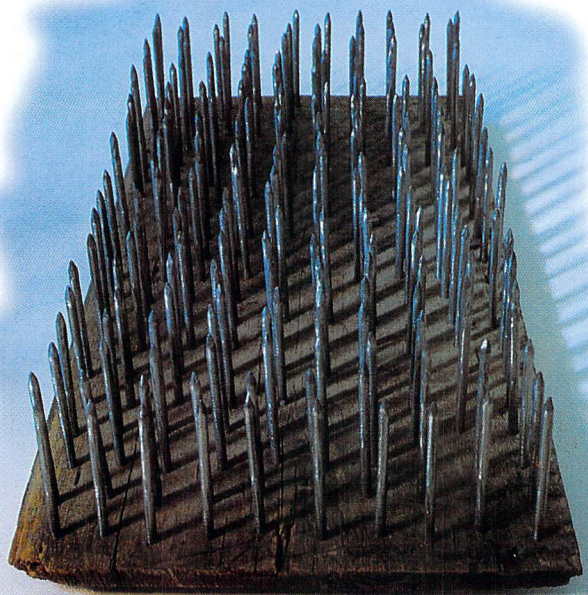


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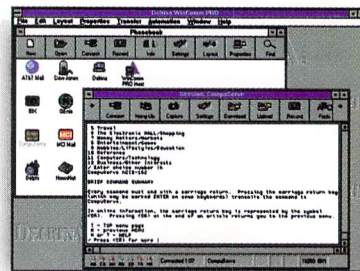
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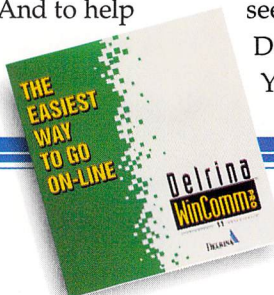
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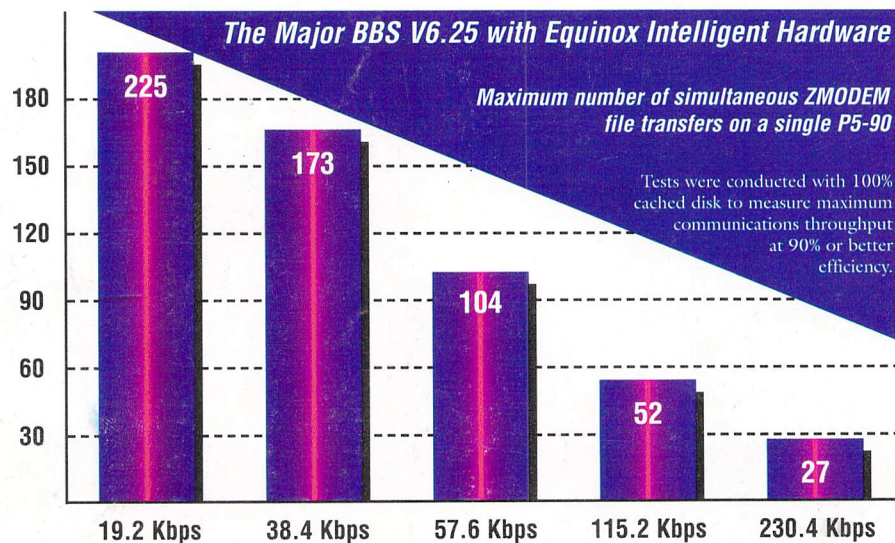
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